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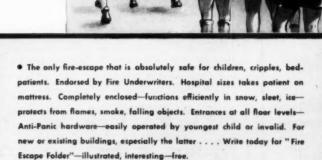
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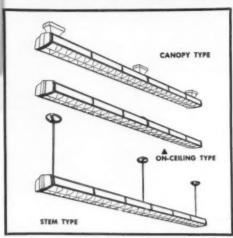
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SCHOOL PROGRESS

THE NATIONAL BUSINESS MAGAZINE OF CANADIAN SCHOOLS

Vol. XVIII	SUMMER QUARTER, 1950	No. 4
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Although we do not necessarily agree with all statements made in the columns of "School Progress", we believe that they are of sufficient interest and importance to bring to the attention of readers.—The Editor.

HARRY F. COLES, B.A., EDITOR Business Offices

57 Bloor Street W., Toronto, Ont.

SCHOOL PROGRESS is an independent publication, for principals, headmosters, inspectors, school board chairmen, secretaries, business administrators and purchasing agents, building superintendents, school architects, superintendents, secretaries and directors of education, and school supply houses throughout Canada.

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THE SPOTLIGHT ON EDUCATION

Conducted by the Editor

Dr. V. P. Burke, former Deputy Minister of Education in Newfoundland, and for some time Director of Adult Education in the province, and one of the founders of Memorial University, has been appointed to the Senate in Ottawa.

Dr. J. C. Pincock, Superintendent of Schools for Winnipeg since 1938, has announced his retirement effective September 3rd, 1950. Dr. Pincock was born and educated in the Maritimes and went to Winnipeg in 1912 as an instructor in Mathematics. In 1919 he entered the Superintendent's office as secretary, and following post-graduate work at the University of Chicago was appointed Assistant Superintendent of the Winnipeg schools in 1921, succeeding to the Superintendent's post in 1938.

John K. Tett, recently appointed Director of the Community Programmes Branch of the Ontario Department of Education, has been appointed a member of the National Council on Physical Fitness. Mr. Tett succeeds Mr. E. C. Cross (whose death was recently reported in these pages in both the above mentioned

Dr. M. E. LaZerte, Dean of the Faculty of Education, University of Alberta, has announced his retirement effective August 3rd, 1950. Although Dr. LaZerte has relinquished his post as Dean, he will still take an active part in university and educational affairs. He delivered the 1950 Quance Lectures at the University of Saskatchewan, Saskatoon, and is at present acting as Canadian representative to UNESCO in Europe.

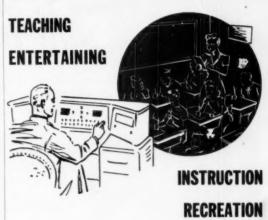
Dr. Herbert McIntosh, Assistant Superintendent of Schools, Winnipeg, has succeeded Dr. J. C. Pincock, whose retirement has been announced for September 3rd next. Dr. McIntosh has been Assistant Superintendent since 1935.

Dr. A. J. Phillips, for the past five years Research Director for the National Committee on School Health Research of the Canadian Education Association, has accepted an important position with the National Cancer Institute, Toronto.

Dr. H. E. Smith of the Department of Philosophy and Psychology, University of Alberta, and for the past three years Director of the Summer School of the University for the Alberta Department of Education, has been appointed Dean of the Faculty of Education to succeed Dr. M. E. LaZerte.

Expanding Services of the C. E. A.

The C, E. A. is now well established as a clearing house of ideas and information on Canadian and international education, and its work is growing rapidly in scope. Realizing that the interchange of facts and figures is quite barren without a background of personal contact, a dozen different ways have been



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THE SPOTLIGHT ON EDUCATION

adopted to strengthen the bonds of friendship among educators so that Canadian education may become a truly national public undertaking with international implications. Among these is teacher exchange which is handled under Teacher Exchange Tenure Bursaries. The Association has also discovered that it can provide opportunities for joint action in situations in which it has been difficult for parallel or competing institutions to work together. In this way it is able to serve provincial departments of education, various departments of the federal government, local school authorities, voluntary organizations and even international institutions.

The Association is a co-ordinating agency in educational research in Canada. It co-operates with other bodies in studies of nation-wide application; it assists in specific studies of proved importance; it undertakes a very few highly significant studies like the enquiry into the supply and training of teachers; it has even been able to undertake specific projects for government departments and local school boards. It has, indeed, unrivalled opportunities for such work and lacks only adequate funds to extend its services through all phases of Canadian education.

At the Annual Meeting of the Canadian Research Committee on Practical Education (C.E.A.) held in Ottawa, March 28th last, Mr. Hugh Crombie, Chairman of the Educational Committee, Canadian Manufacturers' Association, and Dr. J. G. Althouse, Chief Director of Education for Ontario, were re-elected as Chairman and Vice-Chairman respectively of the Committee to continue the excellent work it is doing.

Increasing the Prestige of the Teaching Profession

In an effort to determine just how the teachers of Missouri felt about the status of their profession, Gamma Chapter, Phi Delta Kappa, University of Missouri, sent out a questionnaire in March, 1948, to a ten-percent cross section of the teachers in the state. The method of random sampling was used. Of the 2,300 questionnaires sent out 707 usable returns were received.

After requesting such data as age, sex, marital status, dependents, county in which teaching, and teaching or administrative area, the questionnaire was divided into three parts. In Section "A" of the questionnaire the individual was asked to check three of twelve items which he considered most definitely contributing to the disunity and breakdown of the teaching profession and three items which were of little or no significance. The twelve items included such factors as low salary, lack of community appreciation, lack of personal freedom, insecurity and lack of tenure and low professional qualifications.

Section "B" of the questionnaire contained fifteen statements which the individual was asked to check as extremely important, important or no problem. A sample statement was, "There is too much interference with the school's work by outside pressure groups."

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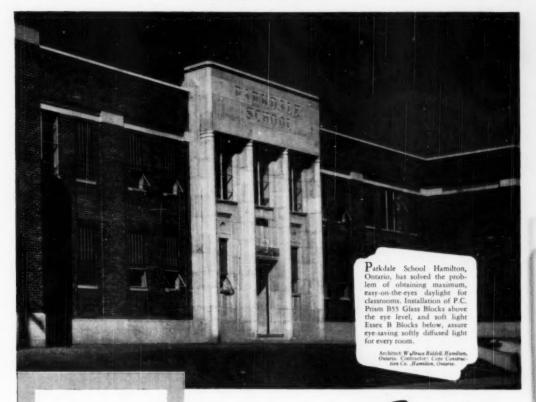
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THE SPOTLIGHT ON EDUCATION

Section "C" of the questionnaire gave the individual an opportunity to write in three things which he thought would do most toward the further unification of the teaching profession. This section was to serve more or less as a check on the other two sections.

A study of the data secured by use of the questionnaire indicated eight areas of major interest. These are: salaries, insecurity and tenure, personal and professional freedom, community appreciation, administrative relationships, living and working conditions, training and certification, and professional organiza-

A summary of the results obtained in this study indicates that the problems which are considered most significant by the teachers of Missouri for the unity of their profession are: (1) low salaries, (2) failure of the administrator adequately to represent his profession before the school board, and (3) failure of teachers to assume responsibility for a unified profession.

University Courses in Journalism

Four Canadian universities offer courses in journalism: The University of Montreal has offered journalism to French speaking students for the past twentyfive years: The University of Western Ontario gives a comprehensive course and successful graduates receive an Honour Bachelor of Arts degree; Graduates of the three-year course at King's College, Halifax, receive a Diploma in Journalism; graduates of Carleton College, Ottawa, are granted a Bachelor of Journalism degree.

To these schools is now added a fifth, the new Ryerson Institute of Technology, Toronto. The course is two years and the student takes journalism plus nine other subjects connected with the printing and publishing trade. The extra subjects include bookbinding, typewriting, English, monotype, photo-lithography, hand composition, lettering lay-out and offset press work and human relations. These Ryerson students will be the first to be trained on all the mechanical operations of a modern printing plant as well as in the techniques of the editorial room. The first course at the Ryerson Technical Institute will graduate in 1951. Religion in Canadian Schools

The following tabulated information regarding religion in Canadian schools is from a recent "Citizens' Forum" booklet published by the Canadian Association for Adult Education:

rion re	a Adult Educ	ttion.	
Prov.	Recitation of Lord's Prayer	Daily Bible Readings	Religious Instruction
P. E. I		Obligatory	Not permitted
N.S.	Permitted	Permitted	After school hours
N. B.	Permitted	Permitted	Not permitted
Que.	Obligatory	Obligatory	Obligatory
Ont.	Obligatory	Obligatory	Obligatory
Man.	Permitted	Permitted	Permitted
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THE SPOTLIGHT ON EDUCATION

What the Public Expects of University Education

Many readers may have noticed the recent survey of what the public expects from higher education conducted and published by "Fortune". The survey was prepared by Elmo Roper, who has some very pertinent things to say about the results obtained which are of intense interest to every educationist.

He finds that the public places far too much emphasis on the practical applications of higher education and shows far too little understanding of the value of the liberal arts. It comes as something of a shock to him to learn that a better appreciation of such things as literature, art and music is designated as the least important college aim for boys by the largest percentage of those who voted on the subject. Training for a particular occupation or profession was overwhelmingly considered the most important. This business man then proceeds to express his strong disagreement with this view and to say, "Indeed, the whole purpose of higher education could be construed as an effort to overcome the ill effects of training in our highly specialized society by giving the individual other reserves than those to be derived direct from his job."

The controversy is, of course, a hundred years old on this continent and does not seem to be any nearer solution than ever.

It is to be hoped that the influence of the opinions of a magazine like "Fortung" will have some influence upon public thinking in this direction and perhaps even to help educationists at last to achieve agreement and set up a universally accepted philosophy of education for the modern world.

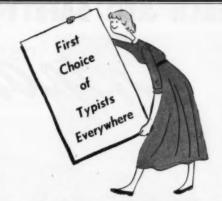
To Become a Personnel Executive

Industrial, retail, utility, and service companies do not usually look for particular college majors or minors when they appoint personnel executives, according to the results of a questionnaire submitted to 147 firms throughout the United States by Donald S. Parks, personnel director and professor of personnel management, University of Toledo. Dr. Parks's study, released in October, 1947, disclosed that personnel executives considered a variety of subjects, such as psychology, economics, English, labor law, and business management (in order of preference), to be most valuable.

There is an undoubted trend "toward college training as a requisite for entrance into the personnel field." Another trend is to require "work experience of applied nature" or factory experience of prospective personnel executives.

The statistical compilations for the report, which is entitled "Survey of the Training and Qualifications of Practicing Personnel Executives," were performed by C. J. Kirschner, assistant professor of transportation and statistics at the university.

Chemistry Prof. — Tell me all you know about nitrates. New Student—Well, to begin with, they're a lot cheaper than day rates.



Smith-Corona OFFICE TYPEWRITER



The new Smith-Corona Office Typewriter gives the utmost in trouble-free, dependable service. Equipped with the new Colorspeed keyboard featuring modern plastic key tops, specially designed and colored for legibility and easier finger control. Many other outstanding features. Typing is done faster, more efficiently and with less fatigue than ever before!

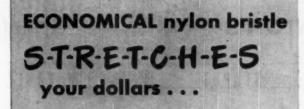
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The Smith-Corona Portable is a revolutionary "all-new" typewriter—it has the full size keyboard of office machines—a lighter "snappier" touch, amazing speed and over a dozen brand new features including the new, smart Colorspeed keyboard to give "big machine" typing ease and results. Ask to see and try Smith-Corona!

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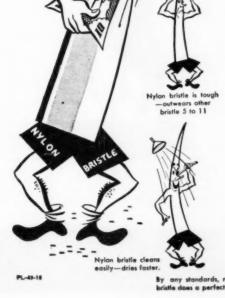
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SCHOOL PROGRESS

Vol. XVIII

SUMMER QUARTER, JUNE, 1950

No. 4

High Schools Must Interest and Hold More Students

"The Secondary School CAN Increase Retention by Improving Its Curriculum and Instruction, and by Guiding Students into Courses Suited to Their Capabilities, Aptitudes and Interests."

DR. J. G. ALTHOUSE, Chief Director of Education, Ontario

(Address to College and Secondary Schools Department, O.E.A., April 12, 1950)

THREE years ago, I urged you, who are practising educators, to devote serious thought to the clarification of the objectives of secondary education, pointing out that, if educators did not succeed in doing this, non-educators would attempt it. My appearance here today is to deliver a progress report. For it is my conviction that the laymen—the citizens of Canada—have at least made a start towards a definition of those aims. In fact, they have enumicated two aims, which at first sight appear to be conflicting.

The first of these popularly-stated aims has emerged from a nation-wide study that began with some figures about the wastage of pupils in our secondary school course which I gave you in 1947. Those statistics were alarming enough, as some of you may remember. They showed the large numbers of boys and girls in this province who did not avail themselves of the free secondary education which was their right, and the equally high numbers of those who undertook secondary school courses, only to drop them before completion. Similar conditions were reported from the other Canadian provinces. The Canadian Education Association interested groups of industrialists, labour organizations and private firms in an exhaustive study of the situation. A National Research Committee was set up, and the co-operation of every Department of Education and of a great many local boards of school trustees was secured. The first major report of the Com-

"Your Child Leaves School"

Second Report Canadian Research Committee on Practical Education.—C.E.A.

°60,000 Canadian boys and girls graduate from high school each year—BUT—73,000 leave school before graduating. Out of every 100 starting school, only 22 finish high schoo, and only 3 graduate from university.

WHY?

Get your copy of the Report and study the reasons.

*Figures do not include Newfoundland and Catholic Quebec schools.

mittee, Your Child Leaves School, has just been issued. The report confirms the inability of current secondary schooling in Canada to recruit and retain youth. Even more significantly for our purposes, it records and analyzes the reasons given by young people for dropping out of the secondary schools.

This is no place for a detailed, résumé of the report. Two features are so prominent, however, that I offer no apology for bringing them to your notice. The first is that, of all Canadian children who pass through Grade VII, 59% of the boys and 51% of the girls leave school without finishing the courses they have begun-they leave with a record of failure to accomplish what they have undertaken. The second is that the majority of these boys and girls give as the cause of their dropping out reasons that are within the power of the school system to correct, or at least to amend. The report remarks: "The school can increase retention by improving its curriculum and instruction, and by guiding students into courses suited to their abilities, aptitudes and interest."

In Ontario we have good reason to believe in the validity of that conclusion. Five years ago, a small group of pioneer schools in rural centres was meeting with success in efforts to relate their courses more closely with the agricultural interest of most of their pupils. Efforts to extend this sort of experimentation revealed two things-they revealed a prompt public interest in the movement, and they showed that only schools with a fairly high enrolment could combine the practical agriculture course with the more traditional offerings of the schools. The first result was unprecedented activity among county councils to enlarge high school areas to make such schools possible; I referred to the beginnings of that activity on my last appearance before you; 123 of these districts have been formed in five years. The second result was the construction of many fine new buildings, specially adapted to the enriched course. These buildings present a wide range of size and elaboration-all the way from the modest but thoroughly modern school at Flinton to the large and striking Medway High School at - Arva in Middlesex County. All of these, however, whatever their size or cost, are alike in one respect; they represent a deliberate effort to make secondary education more attractive and more retentive by incorporating into the curriculum elements of immediate interest and practical importance to the pupils in the communities in which they live.

The same result could be described in terms of the numbers of schools which have worked out their own versions of the practical agriculture course. There were 12 of these in 1945; today we have 66; next year there will be more than 70.

By far the most convincing evidence of the effectiveness of curriculum revision as one answer to the secondary school problem is the response of the rural people to this reorganization of their high schools. Five years ago, there were 27,000 boys and girls from rural Ontario attending secondary schools; last vear there were 38,000. Please remember that, although Ontario's population has shown substantial growth in those five years, that growth has not been in the rural population. More than one quarter of the rural children of high school age in Ontario who are now seeking a high school education would not have been attracted by the courses offered five years ago. This fact, I suggest, indicates that the laymen of rural Ontario have defined secondary education in terms of more attractive subject matter, and they like this definition. New Brunswick, Nova Scotia and Alberta all report findings of the same sort.

As a matter of fact, there is mounting evidence that a similar definition of secondary education is rapidly approaching the proportions of a peremptory demand right across Canada, and it is not restricted to the rural areas.

The meaning of this is plain. Secondary schools are no longer maintained to prepare a select few for public service through the learned professions. They are expected to provide a further stage of education for all young people. The examples I have cited show that one of the objectives of that further education must be to equip those young people for a better understanding of life as they see it in their homes and in their neighbourhood, and for more effective participation in that life. When serious attempts are made to provide such preparation, motivation through interest is strong, and pupil participation leads to parental sup-

port. This, then, is one of the conflicting aims of secondary education which the non-educator has defined for us—the aim of educating young people for immediate participation in the life of their community.

Curiously enough, the other contrasting aim is well illustrated by the same enquiry conducted by the Canadian Research Committee whose significant report I have already mentioned to you. In order to secure the support, financial and moral, of employers and employees, that Committee defined its field of study as practical education, or more accurately, education for practical life. Despite these limited terms of reference, the Committee has been quite unable to restrict its enquiry to socalled utilitarian training. On the Committee sit merchandisers, manufacturers, farmers, trades unionists and a very few educators. Since the untimely death of Dr. Fletcher Peacock of New Brunswick, I have had the opportunity of seeing this Committee in action. What continually surprises the educators is the insistence and persistence with which all the others maintain that their chief concern is not with the specific knowledge or the specific skill that the school imparts; it is with the kind of young person the school turns out. In other words, while the Committee's study inevitably underlines the importance of the course of study and the significance of relating that course to the pupil's felt needs, the Committee itself is quite sure that knowledge and skill are not enough; that social and ethical factors are even more important. This, of course, simply reinforces the truth I commended to your thought some vears ago-that we cannot afford to draw distinctions between vocational and liberal education, between practical and cultural development.

It is to make easier and indeed inevitable the elimination of such old and artificial distinctions that the Ontario Department of Education has recently brought the grants for all kinds of secondary schools within the same general framework. As long as grants for vocational education were radically different from those for academic secondary education, our so-called composite schools were misleadingly labelled—a composite school was merely a vocational

school and an academic school under the same roof. This led to anomalous situations in which much education that in any other province would have been called vocational was carried on in our academic schools. Striking examples are the practical agriculture courses in 64 of the 66 schools I mentioned, and many commercial, home economics and general shop departments. The new grant scheme will, I hope, encourage the more effective pooling of all the opportunities offered by a modern school, to meet the needs of individual pupils and the requirements of communities.

It is only by the realistic recognition of the essential unity of all worthwhile education that we can hope to solve our most urgent problem in the secondary schools, which is the harmonizing of the two divergent popular objectives I have mentioned. From what I have said, you can see that the Canadian public wants secondary schools to train a wide variety of young people-all the young people-by means of a course of study so obviously related to their practical needs that they will recognize its value and work at it with enthusiasm. At the same time, spokesmen for the various groups of Canadians most interested in this practical preparation for life declare that specific skills and particular bits of knowledge are not as important as ethical standards, moral perceptions and general outlook upon life.

What is the educator to do in such a situation? It is too late to lament that the situation is impossible; it is upon us; we must cope with it.

We might do one of three things. We might maintain that the school's traditional concern has always been with subject matter, and we might refuse to go beyond that. This course, I fear, would prove embarrassing as soon as some critic pointed out that those of our colleagues who are most insistent about the importance of subject matter usually claim some disciplinary value for the kinds of subject matter which they esteem most highly, that is, they use subject matter for moral as well as intellectual training. And these colleagues are weighty and of high repute.

Or, we may refuse to try to adapt our courses to the requirements of the fleeting hour, and concentrate upon the production of the wholesome, complete individuals which democracy needs in order to persist. This policy will commend itself to those who shrink from change, for they will find it easy to persuade themselves that the kind of instruction to which they have become accustomed produces just this sort of individuals. Perhaps it does, for those young people who find it interesting, but the evidence is overwhelming that not nearly all the young people of the country fall in this class.

What is the third thing we can try to do? I believe the third choice is the one we must make if we are to win the confidence of the public whom we serve. We must try to combine the essential elements of the two apparently-conflicting objectives which the non-educators have set. We must attempt to retain the strong motivation which is the significant feature of the first objective, that is, the provision of courses which are appealing because they have a clear bearing on current living and because they are within the grasp of the ordinary young people in the schools. At the same time, we must try to conserve the training in the free discharge of civic and individual duty which seems to be the backbone of the second objective, namely, the development of young people with the virtues required by democratic society. Such a combination will not be easy, but it is well worth a sustained effort. And I again remind you, that effort, to be successful, must be made without delay. I do not see how we can expect to have many more years in which to make up our minds.

Let us start with the admission that the secondary school is no longer a selective institution, offering to a fortunate few coveted opportunities to prepare for positions of high esteem and generous remuneration. Let us accept the fact that the school must take all comers and must seek to do something with them and for them that is literally worth their while. This means that the school must offer a variety of courses, or at least a flexibility of course which will give appealing opportunities of development to several recognizable types of children,-not only to the

book-minded, the manually inclined, and the artistically or musically gifted, but also to the great number of ordinary children who show no special talent, no outstanding native endowment.

The temptation here, of course, is to try to predict what difficulties and dilemmas each of these groups is likely to encounter in their adult life and to undertake to give them specific instruction calculated to reduce or remove these difficulties. Certain educational leaders have recently pointed out to us the futility of such an effort. Indeed, we have had a good example of the futility of this sort of thing here in Ontario. That is what we once attempted to do in teacher-training; we have had the

THE CANADIAN EDUCATION ASSOCIATION

27th Annual Convention October 2nd, 3rd and 4th, 1950 EMPRESS HOTEL

Victoria, British Columbia

good sense to abandon that policy in that field; let us not repeat the experience in secondary education.

It may, however, be fruitful to devote some time and thought to the possibility of discovering or devising such fundamental systems of knowledge and such basic skills as may be capable of adaptation to changing conditions. We must be careful to remember that the application of this fundamental knowledge and basic skill to the current requirements of social and economic conditions must be so clear that even the dull pupil can discern it. Otherwise motivation is lost, and, without strong motivation, only feeble development can be expected.

Principal R. C. Wallace of Queen's University, has pointed out another difficulty in which this course may land us. He sadly forecasts the time when the intellectually gifted few may have to be ignored in the concern of the school for the undistinguished and indistinguishable many. I have the greatest respect for the

Principal's courageous insight and clear judgment. I do venture to hope, however, that his prophecy may be so far in the future that none of us shall see it come to pass. For we shall need leaders in the democratic world, and we shall need them soon. Some potential leaders can be detected early. I think that we should take every pains to see that they are detected. I think that we should be prepared to undergo every inconvenience to see that they are well-trained for the responsibility that will be theirs. This we must do, if only in self-defense; this we shall be zealous to do if we crave some of the highest pleasures of teaching.

But in a democracy, followers are as important as leaders, and many times more numerous. But followers who follow blindly are no asset; they are indeed a liability, for they follow persons rather than principles. So we must make sure that the followers as well as the leaders have a chance to develop the characteristics of democratic citizenship. For followers, too, must make choices, and must make them in the light of their obligations to their fellows. They must for example, choose leaders; it is one of the reproaches of democracy in action that so many citizens neglect this right which is also a duty. Moreover, they must choose whether to retain or replace those leaders after

! An important question, then, is this. Is it possible in a secondary school with many courses or at least with many variations of the course, to habituate young people, whether dull or bright or just ordinary, to exercise free will, but to exercise it in the full light of their obligations to others? Of course it is easier for the school to do this in a community in which such choices are commonly made by adult citizens. But I cannot agree that the school is inexorably condemned merely to follow the community. There are communities in which the school does lead the whole community into more effective and more humane social patterns. I have been lucky enough to live and serve in such communities; so have many of you. My point is that the school is not absolved from the obligation of making this attempt by any community failure to

(Continued on page 45)



Special Advantages

- All students and staff participate and the work is not loaded on one or two willing workers.
- Extra-curricular activities become part of the daily programme.
- Noon hour supervision problems disappear and rural students are not loafing around the school or streets or pool rooms while urban students go home leisurely for lunch.
- Buses leave one-half hour sooner than previously and rural students likewise get hom earlier.

Town and Country Students Share Alike IN ALL EXTRA-CURRICULAR ACTIVITIES at Tilbury District High School

OUNTRY pupils at the newly established Tilbury District High School are getting an "even break" in extra-curricular activities with their urban fellow students that is attracting attention across the province.

Enquiries from other district high schools in the past few months have shown that this problem is a difficult one. The method worked out at Tilbury has proven highly successful, from the points of view of both pupils and staff.

The starting point of the "square deal" for the country pupils, is a 31 minute noon lunch period, during which low-cost hot dishes are served at the cafeteria.

The school of 306 pupils is split into three groups, which take successive half-hour periods in the school cafeteria, while the remaining two-thirds of the school carry on regular study periods. About 98 per cent of the pupils, both rural and urban stay at the school for lunch.

The cafeteria is operated by a chief cook, under supervision of the school board and principal, with two full time cooks assisting. A hot plate of meat, potatoes, vegetables and bread costs fifteen cents. Milk may be bought for five cents per half pint, while ice cream, cakes, chocolate bars, peanuts, popcorn and lifesavers are obtainable.

"Noon hour supervision problems do not exist", Principal Briggs states. "Rural students are not loaf-

ing around the school or streets or pool rooms while town pupils go leisurely home for lunch."

The half-hour noon luncheon break gets the pupils through a full day's class room work by two-forty p.m., and from then until three-thirty p.m., both the town and rural pupils share equally in the use of the school auditorium, gymnasium, playing fields, or in club activities. Thus extra-curricular activities become part of the daily programme for not just some, but for all pupils.

The rural areas contribute equally with the town towards the support of district high schools, but in many places the majority of extra-curricular activities are carried on after rural buses leave, causing a split in the school body, and sometimes in the school board. There is no such difficulty under the Tilbury arrangement.

During the course of a week, each pupil finds his extra-curricular activity—all of which is under teacher guidance—divided as follows: one day for sports; two days for other activities; one day for study under supervision; one day in the auditorium to watch games or a programme for the entire school.

In sports, the whole school is divided into two groups, senior and junior. Boys of each group have the gym one day, and girls of each group one day per week. The sports program is obligatory for all students, except the physically unfit. There is keen competition between teams, for example, the school operated 16 softball teams last year.

of the Tilbury System

- 5. This system provides equal opportunity for rural and urban students to use the school facilities including the gymnasium under adequate staff supervision which is their just right since everyone is participating equally in financial support.
- 6. One of the most important advantages of all is that regular classes carry on without loss of time or periods and at the same time provision is made for school games and activities. This is an especially important item for Grade XIII students who are preparing for long, stiff examinations. Teachers of these students appreciate this opportunity of keeping up to their teaching schedules.
- Since urban students also get home ½ an hour earlier, this is appreciated by those who have after school jobs.

Tilbury District High School is served by thre emodra school buses. 98% of the pupils take their lunch in the school cafeteria, Organized sports are facilitated by the modern gymnasium.

Other activities which may be chosen by students include typing, home economics, or shop, hobby shop, or dancing, glee club, library club, press club, theatre club, audio visual club, senior art club, senior literary club, junior literary club, junior stamp club.

On Monday any student who lives outside Tilbury town may go to the public library during the activity period, after first obtaining a permit signed by the

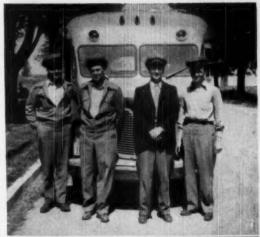
teacher of English.

Study spares, under supervision of a teacher, must be taken by all pupils who do not have an activity. Students who run afoul of discipline during school hours, spend their activity period in a detention room, and catch the buses at the regular time.

The only pupils who stay after three-thirty are the members of the school teams, and as the students who make these teams are anxious enough to be there for practice, they arrange their own transportation or hitch-hike home. Boys use the gym two days a week, and girls two days, and Fridays there is generally a scheduled night game.

"From the point of view of the teaching staff,"
Principal Lewis C. R. Briggs states, "the system is
well received too, for it avoids loading all the extracurricular activities on a few willing workers. Instead
all teachers share equally in this part of school work
as well as regular class room instruction."

And, of course, nobody objects to going home from school at 3.30 o'clock, finished for the day.







Practical Agriculture is stressed in this Course.
 The Girls find Home Economics practical too.
 Boys and girls are encouraged to USE the library.

Explanation of Extra-Curricular Schedule given on opposite page

Sports

The whole school is divided horizontally into two groups (equal)—one called senior, the other called junior, but these names do not necessarily have anything to do with age. It is a numerical division only.

The boys and girls of these two divisions make up four divisions which use the gym one day a week. The fifth day is used for a whole school activity.

This sports programme is obligatory for all students in the division according to the schedule. Physically unfit students are taught good spectator participation and are used as clerical assistants.

The whole school is also divided vertically into two houses so that there is competition in each grade throughout the school.

In this way the sports programme reaches all students and mass participation is achieved. For example, last year we operated 16 teams for softball in a student body of 240.

Reducing Numbers in the Groups

This plan to put ¼ of the student body in the gym at one time drains large numbers away from other activities and reduces them to an acceptable size.

The Schedule

The remaining part of a schedule can be set up after surveying the choices, interests and abilities of the students and staff members. At Tilbury School with a student body of 300 and a staff of 14 we were able to set up 29 activity groups, including sports. It should be noted that Senior Activities are scheduled during the time Juniors use the gym and vice versa.

Outdoor Activities

When weather permits all activities are carried on by teams out of doors. This year the spring activities will include the following teams: softball, volleyball, badminton, ping-pong, study. All will take part on a rotation basis. Track and field and football were practised last fall.

Study Periods

After students have joined two one-day activities or one two-day activity, they are allowed to choose a study period on one of the days and two rooms are set aside for this purpose. This provides opportunity for them to improve their academic standing.

Public Library

Permission is given on Mondays to go to the Public Library. This follows the library period in English that day and the English teachers supervise the issue of permits.

Detentions

Detentions have priority over all other activities. This makes them all the more effective and places them in the regular programme so that all students are ready for the buses at 3.30.

Auditorium Programme or Mass School Activity

One day per week is available for the whole school (Continued on page 46)

TILBURY DISTRICT—HIGH SCHOOL January 1950

Extra-Curricular Activity Schedule

conform to the rules on the back of this sheet. This is to certify that I have chosen the activities marked "X" and that I agree to

ording to rules

Date

Grade

Student

SPORTS (obligatory)	ACTIVITY	Extra-Cu
Gym	ROOM	Extra-Curricular Activity Schedule
ALL JUNIOR Players—Miss Coutts GIRLS	MONDAY	ty Schedule
ALL JUNIOR Players—Mr. Day BOYS	TUESDAY	Approved according to rules
ALL SENIOR Players—Miss Coutts GIRLS	WEDNESDAY	
ALL SENOR Players—Mr. Rapsey BOYS	THURSDAY	(Home Room Teacher)

Spectators-Mr. Jackman

Spectators-Mr. Jackman

Spectators-Mr. Schneider

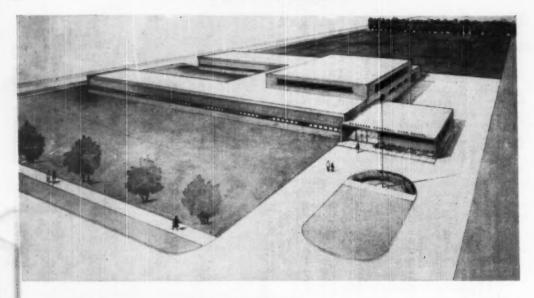
Spectators-Mr. Schneider

HOBBY SHOP OR	HOME ECONOMICS OR SHOP (one day activity)	(one day activity)	SPARES (one day activity)
Hall	H. Ec. Shop	СОМ	IXA
	XB, XIB, SP COM Mr. Lee	XIA, XII, XIII—Mr. Day	Mr. Anderson Mr. Schneider
	XIA, XII, XIII Mr. Lee	XB, XIB, SP COM— Miss Coutts	Mr. Anderson Mr. Mayer
Miss Wagg		IXA, XA-Mr. Day	Mr. Anderson Mr. Mayer
Miss V		IXB, IXC—Mr. Day	Mr. Anderson Miss Coutts

HOBBY SHOP OR DANCING (one day activity)	Hall	*		IXB, IXC Mr. Lee	IXA, XA
GLEE CLUB (as indicated)	Art	SENIOR MIXED— Miss Foster (Mon. and Tues.)	SENIOR MIXED— Miss Foster (Mon. and Tues.)	SENIOR BOYS— Miss Foster (one day activity)	ALL GIRLS-Miss Foster (one day activity)
(one day activity)	Lib	SENIOR-Miss Young	SENIOR-Miss Young	JUNIOR-Miss Young	JUNIOR-Miss Young
PRESS CLUB (1 or 2 day activity)	XII	SENIOR-Mr. Graydon	SENIOR-Mr. Graydon	JUNIOR-Mr. Graydon	JUNIOR-Mr. Graydon
THEATRE CLUB (two day activity)	AGR.	SENIOR—Mr. Rapsey (Mon. and Tues.)	SENIOR—Mr. Rapsey (Mon. and Tues.)		
AUDIO VISUAL CLUB (one day activity)	AGR.			JUNIOR-Mr. Jackman	JUNIOR-Mr. Jackman
OTHER CLUBS (one day activity)	іхс	SENIOR LITERARY— Mr. Marchand	SR. ART-Mr. Schneider	JUNIOR LITERARY— Mr. Marchand	JR. STAMP-Mr. Mayer
AUDITORIUM	хш	ANYONE CHOSEN— Mr. Mayer	ANYONE CHOSEN— Mr. Marchand	ANYONE CHOSEN— Mr. Rapsey	ANYONE CHOSEN— Mr. Marchand
SUPPLEMENTARY	Public	Or Woods:		O Wall and the second of the s	

JUNIORS-IXA, IXB, IXC, XA SENIORS-XB, XIA, XIB, XII, XIII, SP, COM

activity group.



ST. LAWRENCE HIGH SCHOOL

Township of Cornwall, Ontario

H. H. ROBERTS, ARCHITECT, WESTPORT, ONTARIO

THE school is situated at the corner of McConnel Ave. and Second Street, Cornwall. The site is approximately 9.1 acres in area, being 660 feet side by 600 feet deep:

The high school will accommodate 510 pupils and has been so designed that an entire second floor may be added to double this accommodation if necessary. Space has been allocated at the west end of the south and north corridors and the two teachers rooms so located that staircases may be installed in these spaces for future expansion.

Accommodation in the school is as follows:

7	general classrooms	23'	X	30'
1	library classroom	23'	X	40'
1	typing room	24'	X	40'
1	commercial room	24'	x	40'
1	sewing classroom	24'	X	35'
1	home economics room	24'	x	50'
1	agriculture classroom	24'	X	34'6"
2	shops	24'	X	60'
2	science rooms	24'	X	40'
1	art-geography	24'	X	40'
1	double gym-auditorium	60'	x	80'
C	afeteria, principal's office, guidance r	oom		

The plan is U-shaped and the various activities are grouped and located to prevent interference with one another, shops, science, agriculture and kindred rooms being planned to form one wing, general classrooms, a second wing and commercial rooms and gymnasiumauditorium the connecting link.

Classrooms have glass for their entire width. Forced

hot-water convectors are totally concealed, the front panel and top of the convectors being especially fabricated to form a continuous wall surface and sill for the full width of the room. This assembly is to a height of 3'6" above the floor. Aluminum ventilating and vision sash extend a further 2'6" in height. Directional glass blocks 6'0" in height and built directly on top of the sash extend to the ceiling line.

Classroom ceilings are acoustic tile, floors asphalt tile, walls plaster. Colours of all materials are carefully integrated to provide controlled reflectance values. Chalkboards are of green "Nucite"; sidewall tackboards of light brown cork. Chalkboard and room lighting is incandescent, the former being recessed, the latter a completely indirect fixture utilizing silvered bowl lamps. The reasons for deciding to use incandescent fixtures of this type are of interest. It was found that although power consumption by fluorescent lamps is certainly less, the initial cost of the fixtures was so much higher than the incandescent fixtures that this economy would not be operative for the first ten years. In addition, unless the more expensive suppressors were installed in the fluorescent fixtures, interference with the program sound system would likely occur. The architect feels too, that fluorescent lamps will undergo considerable and rapid change within a relatively short time, a fact that leads to the belief that the Board of Trustees should not be saddled with fixtures which may become obsolete and cannot be changed because of the investment already made. Indications are that the high school will be expanded rapidly and since all additions will be made as a second floor, the electrical feeders now installed for incandescent lighting will be adequate for both floors or double the room capacity if at a later date improved fluorescent lighting or its successor is installed on both floors. This is only possible because of the relatively low cost of the silvered bowl incandescent lamp fixture. It means that when expansions are ultimately made to electrical service feeders will remain untouched and still be adequate.

The library classroom is intended for use as a normal classroom, library, audio-visual room and board room, and is being equipped eccordingly.

The shops face north so deceiving and consequently dangerous shadows are eliminated on machinery. A method of providing complete freedom of planning in the matter of shop layout has been incorporated.

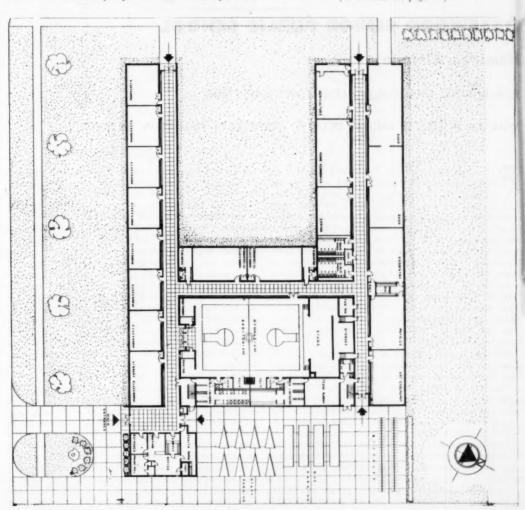
Electrical services for machines are run in fibre duct located in the floor slab. The ducts are so run that machines can be located at any location and still obtain power simply by drilling into the duct and installing inserts. Tools and inserts, etc., are supplied under the general contract, thus giving the shop instructor complete freedom in the arrangement of equipment at all times.

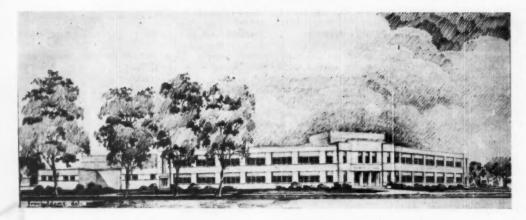
The shops, science rooms and home economics rooms are supplied with bottled gas distributed from a central point on the exterior of the building.

Flush lockers are provided for students in all corridors. Lockers are connected to the general air exhaust system.

Noise in corridors is reduced by acoustic tile ceilings and by the introduction of a 6'0" wide strip of heavy linoleum installed flush with terrazzo borders on either side.

(Continued on page 46)





DALEWOOD SENIOR PUBLIC SCHOOL

Hamilton, Ontario

R. A. RIDDELL, DIRECTOR OF ELEMENTARY EDUCATION

WILLIAM R. SOUTER AND ASSOCIATES, ARCHITECTS, HAMILTON, ONTARIO

OR some ten years the Board of Education for Hamilton has been experimenting with and developing an Intermediate type of school. Five such schools are now in operation. Dalewood School the first building constructed to serve the pupils at Grades 7 and 8 level; the others have been altered. The possibility of the facilities being required in the future to serve Grades 9 and 10 was also kept in mind. Dalewood School is, therefore, an Intermediate or funior High School type of building. The students remain half of each day in the home room and study English, Social Studies and Mathematics. During the other half-day they rotate among the special rooms: Speech and Dramatics, Art, Music, Physical Education and Health, Science and Agriculture, Home Economics and Shops.

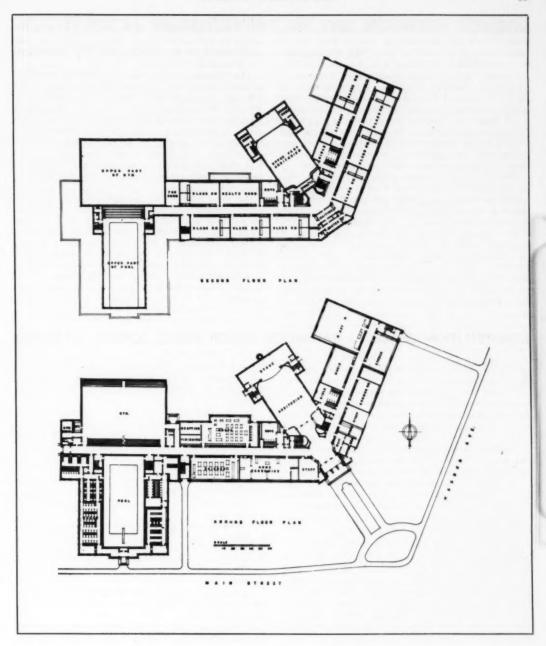
The school was designed as a functional school, to make possible the development of a programme to meet the needs of students of this age. The teachers of the Senior Public Schools throughout the city spent many hours discussing the features such a building should have and preparing suggestions. The special rooms were designed by teachers of the subject in Hamilton. These suggestions have been most helpful in providing a school that is built specially to carry out a specific programme but of such flexibility as to meet changes that may take place in the future.

In Hamilton teaching by ability groups especially in the skill or tool subjects has gradually developed

until it is an accepted policy. This approach makes it necessary for groups to work by themselves or with the teacher. To avoid disturbing the others in the classroom, project rooms have been placed at the rear of the classrooms. These permit reading groups, enterprise work and similar activities to be carried on while instruction is being given to other groups.

Small details, carefully provided for, make a more efficient teaching situation. Cupboards, for instance, were designed with the assistance of teachers to take the size of paper and other supplies that are used. Shallow drawers are provided for pencils, erasers and similar supplies; wide areas with sliding doors for globes and bulky objects. Folding tables in the project rooms save space and can be used as work tables or easles. Shelves under the windows between heating units provide excellent space for books and other materials that must be readily accessible. Tack boards cover much of the room walls.

The rooms for teaching special subjects have received similar attention. The speech and dramatics room has a small stage for dramatic work with steps across the width of the front so that speech choirs can stand on the steps. The music room has special acoustic treatment to aid in the work in the room and prevent interference with other rooms. The science room has special equipment that is inexpensive but very useful, such as small display cases for classroom museums, a utility table for potting plants and storing earth and supplies.



The auditorium is small, seating about 400 children. The walls are of block and the ceiling is acoustically treated. A small child can speak from the stage and be heard at the back easily without amplifying equipment. The auditorium is an educational situation for teaching, not just an area to be

used for school assemblies. It is so designed that the speech and dramatics work will be in the auditorium when the school fills up with senior pupils. Pew type seats are used because they are quiet and easy to enter.

The gymnasium is large so that it can be divided

into two areas by folding partitions. The girls can work on one side and the boys on the other. After four o'clock the surrounding schools may use the gymnasium on schedule for their house leagues. Since it can be divided, two groups can be accommodated at one time. School games usually have a number of spectators. Folding bleachers provide seating for about 125 in each part. For senior games the whole gymnasium may be used. By making the gymnasium a bit larger and dividing it we have the facilities of two gymnasia. Gatès in the halls close off the auditorium and gymnasium so that these facilities, with toilets, will be available for community purposes but there will be no access to the rest of the school.

The school can accommodate 850 to 900 Grade 7 and 8 pupils. At the present time the school has 600 pupils in attendance. When the larger enrolment is reached two teachers will instruct in the art room, home economics room and the shops. These rooms were constructed large enough to permit this arrangement without partitions except in the art room, and have been carefully planned for the work of these courses. The home economics room and shops are admirably suited to the present arrangement of three or four activities at one time. The art room is plentifully supplied with cupboards, one of which is the

walk-in type for storage of large pieces for murals, etc. The library has a reference area for the use of pupils as well as the usual shelves and tables. Adequate rooms for the Nurse, Doctor and Dentist form the Medical Services area.

The principal's office, the office for his secretary, and the school supply room and book room form a unit just inside the main entrance. Teachers' rooms for men and women are of ample size. The women teachers' room has a kitchenette alcove and lunch area. A programme clock and intercommunication facilities assist greatly in the smooth functioning of the school. The intercommunication has attached F.M. and A.M. receivers and sufficient channels to handle two different programmes to the selected rooms at the same time.

Dalewood School was designed three to four years before construction commenced because restrictions on building were imposed by the Federal Government. Other areas of the city were more cramped for accommodation at the time and schools were built in these areas. During the period of waiting, costs increased markedly and if the school were planned immediately before building, no doubt, many of the features would need to be omitted in the interests of economy.

CONSTRUCTION DETAILS - DALEWOOD SENIOR PUBLIC SCHOOL, HAMILTON

ONSTRUCTION in broad outline is reinforced concrete foundations and floor slabs on structural steel skeleton. The ground floor generally is on the ground constructed over compacted gravel fill, only the boiler room, coal storage and equipment rooms, mechanical and electrical, being below grade level.

The walls are constructed of Cooksville Everhard red pressed brick and structural clay tile. The interior partitions are of clay tile and all walls except those in the Gymnasium and Auditorium are plastered. The inside of the walls of these two exceptions are laid up with Haydite block with no applied finish.

The roof is of Haydite precast slabs on structural steel covered with tar and gravel roofing.

The ceilings of all classrooms, shops, offices, auditorium, etc., are covered with acoustical plaster, as are the ceilings of the corridors and stairways.

The classrooms include two project rooms separated from classroom with wood and glass screens and from each other by glass block. The window openings in the classrooms are of steel sash glazed with clear glass and the upper third of the openings are glazed with directional glass block.

The floor finishes in all classrooms, except shops, are mastic tile, as are the second floor corridors; the ground floor corridors and the staircases are terrazzo. The floors in the shop area and the Gymnasium are hardwood.

All pupils' lockers are in the corridors so that there are no coat rooms in the classrooms. Teachers' cupboards are placed in every classroom and shop areas,

etc. All classrooms have supply cupboards and in the special purpose rooms suitable and varied cupboards are arranged for accommodation of the required material.

The heating of the building is accomplished by means of concealed convectors throughout, with the addition of automatically controlled "Univent" in each classroom and teaching area. Convectors and Univents are built into continuous shelving below the windows, providing additional storage space for immediate supplies and accessories to classroom routine. The tops of these shelves are of Formica, forming a mar-proof surface wide enough to make a usable exhibition space.

Electrical power is taken from H.H.E.S. at 2300V., 3 phase, 25 cycle and transformed to 120/208V., 3 phase, 4 wire through an indoor sub-station owned by the school. Motors are fed from the 208V., 3 phase for shops, heating, ventilating and all domestic services.

Lighting is single phase with the load balanced on the three phases of the 120/208 volt distribution system.

Lighting in classrooms is designed for corrected daylight distribution. Night time intensities vary from 60 to 75 foot-candles are obtained by the use of 6-4 lamp direct reflecting louvred fixtures per standard classroom.

Lighting sources in classrooms are augmented by spotlight type blackboard lights.

Decorative type lighting is used in the lobby and auditorium and consists of strip lighting mounted in plaster coves.

MECHANICAL ENGINEERING IN THE MODERN SCHOOL

NICHOLAS FEDOR, MECHANICAL ENGINEER — Address, O.A.S.B.O.

WILL try to give you a brief outline of the contribution of the mechanical and electrical engineer to the success of the modern school. To achieve success is certainly very difficult. It has to deal with such different features as the comfort of the pupils, the personal preferences of teachers, the approval of the Board granting financial help and last but not least, to conform to aesthetic views of the architect, and try to keep up our own ideals. Usually the mechanical and electrical engineers are responsible for the lighting, heating, ventilating and plumbing of schools.

Lighting

In our lighting design, we attempt to give all consideration to eye sight preservation and improved scholarship. For these purposes, high level, glareless, well diffused artificial lighting, which in case of necessity supplements also natural lighting, should be provided. It is an apparent general tendency for the school to be the centre of the modern educational system, including extension gatherings held at night. The lighting installation should be designed to provide good illumination to meet all requirements. While the American Institute of Architects and the Illuminating Engineering Society devised the American Standard Practise for School Lighting, this is more or less only a guide for our work around schools. Individual jobs are designed to suit local conditions. For classrooms in general, 30 to 50 footcandles are the commonly used illumination levels. The most commonly used layouts for this range are, first, to use 6 or 8 incandescent fixtures, 500 or 750 watts each, or to use semi-indirect fluorescent fixtures in continuous rows at right angles to the blackboard or in continuous rows of fluorescent fixtures, recessed, usually parallel to the blackboard. Each system obviously has its advantages and disadvantages. The incandescent fixtures are the least expensive and by using high wattage lamps, have no flicker whatsoever, which is of extreme importance in the 25 cycle areas. However, for the same footcandle illumination, in general, twice as many watts are needed. This is objectionable due to high operational costs and added investment costs due to heavier feeder cable, larger distribution board, heavier entrance service requirements and larger amount of heat generated with higher wattage lamps.

The semi-indirect suspended fluorescent luminaires in continuous rows lengthwise to the room, are possibly the most preferred ones. The objection to them is their comparatively high fixture cost and rather questionable appearance.

Recessed troffers installed parallel to the blackboard will give a very pleasant set-up and as far as the fixture is concerned, the cost is not too great. However, obviously they should be used only where a suspended ceiling is considered anyway. If they are installed parallel to the blackboard, the row next to the blackboard could be used in case of necessity as a black-

board light. The disadvantages of this system are that for turning on the inside row on a dark day, a special switching arrangement is necessary and the brightness ratio of the ceiling is poor unless special precaution is taken against it. For auditoriums, gymnasiums and corridors, and other similar purposes, the use of incandescent lights is most common with an illumination level of 5 to 20 footcandles. In general, the wiring system should allow for flexibility with sufficient convenience outlets and preferably using automatic switches.

Heating and Ventilating

The heating system of a modern school has to be considered together with ventilation and four main types are considered, each having its own merits under certain conditions. These four types are: Steam Heating, Hot Water Heating, Hot Air Heating and Radiant Panel Heating.

Steam Heating—in a multi-storey school, where very flexible operation is required, a differential vacuum system might be an advantage. However, the difficulty of maintaining a vacuum on an extensive system with the available school personnel, results, sooner or later, in losing the necessary high vacuum, and reverting the system to a straight low pressure steam job. Therefore, in general a forced hot water heating system is preferred. Its simplicity, the absence of traps and therefore no need for maintenance, makes this system preferable in most cases.

The ventilating requirements affect the steam heating in the same way as the hot water heating; however, in the case of hot air heating, obviously a ventilating system could be incorporated in the heating system proper. Nevertheless, particularly with modern designs of elongated single storey jobs, there is hardly any justification for the high investment cost of the hot air heating system. It still has justification in small schools under special conditions.

Radiant Panel Heating-is coming more and more into the limelight. In my considered opinion, for single storey schools in our climate, if the system is properly designed and the building well insulated, it is an ideal heating system. Its advantages are that it is completely concealed, does not interfere with the aesthetic treatment of classrooms, gives uniform temperature by using large radiating surface at low temperature, the absence of air currents created by convectors or radiators and consequently, also no dirt accumulation or streaked walls. The obvious disadvantage is that it is an inherently slow heating system which doesn't respond to sudden temperature changes as quickly as hot air heating would for instance. However, the outdoor, indoor control, plus individual classroom thermostatic control, plus a moderate amount of ventilation, will provide sufficient flexibility. Nevertheless, in most cases, I don't consider that auditoriums or gymnasiums should be heated with this type of heating system.

(Continued on page 46)



BANTING MEMORIAL HIGH SCHOOL

Alliston, Ontario

GORDON S. ADAMSON, ARCHITECT, TORONTO

HE Banting Memorial High School being built at Alliston is of special interest at this time as one of the new district high schools being organized throughout the province of Ontario. This modern type of rural secondary school provides all the educational and community opportunities and interests offered by the best urban schools, and is doing wonders in reviving the interest of the adolescent boys and girls of the farming communities in further education. That these district schools are proving an outstanding success is borne out by recent statistics which show that the attendance of boys and girls in country high schools is increasing rapidly. The increase in the last five years is from 27,000 in 1945 to 38,000 in 1949, or better than 30%. Furthermore these figures give a true picture as in the same period there has been no appreciable increase in the rural population of the province.

The fact is that the new schools offer agricultural courses for young farmers and home economics for young housewives, providing both practical and interesting studies for these young people and at the same time create a community centre of social living that is making rural life really active and interesting for them. The ultimate result of this educational and community service may well be to bring back to farming and village business some of the original status and respect of former days, and also make life in many ways as attractive in rural communities as anywhere in the country.

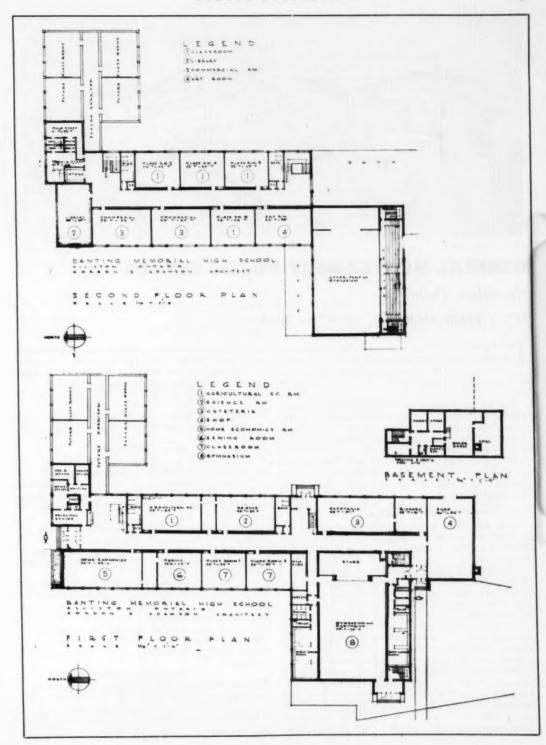
The Banting Memorial High School will serve a district in western Ontario covering several townships,

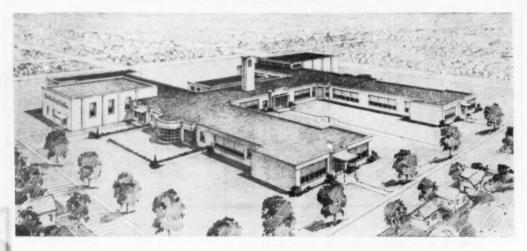
including the villages of Alliston, Cookstown, Beaton, Tottenham and the military community and establishment of Camp Borden. Initial attendance is estimated at 420 students, but if experience in other newly organized districts is duplicated, this figure will undoubtedly increase materially as the new services get under way. The area covered is a strong one capable of supporting a secondary school centre providing all the courses and interests of the modern secondary school curriculum — agricultural science, farm mechanics, home economics, music, art, sports and a full range of extra-curricular activities.

The school is being built on a site 718' x 596' (approximately 9 acres) with plenty of space for practical agricultural work and gardens as well as a sports field for school and community. The building is two storeys of reinforced concrete faced with brick. Only in the 45' x 70' gymnasium section is structural steel used because of the wide roof span. Only sufficient basement is being excavated for the heating plant, central ventilating room, electrical room and some storage space.

The overall plan of the school is well conceived with a self-contained administrative section immediately adjacent to the main entrance. There is a principal's office, general office and waiting room, vocational guidance and health rooms on the first floor. On the second floor, immediately above, are generous men and women teachers' rooms.

The gymnasium-auditorium, 45' x 70', has a separate entrance with foyer direct from the campus. It is (Continued on page 44)





GENERAL MONTGOMERY PUBLIC SCHOOL

Hamilton, Ontario

GEO. T. EVANS, ARCHITECT, HAMILTON, ONTARIO

In the planning and design of the present day "modern" school, the architect is faced not so much with the problem of suitable layout and style, as with the comparatively high present-day construction costs.

The necessity of keeping construction and subsequent maintenance costs down, is probably no greater today than in former years, but there is a great difference between the present day buildings and those of "the good old days". So much more is required in the present day school than formerly, that the cost per classroom is relatively much greater, hence the greater necessity of finding ways and means to reduce construction costs.

The Old School and the New

In by-gone days, a school consisted mainly of just so many classrooms and little else. There were no cloakrooms—hats and coats were hung around the walls on pegs.

The entrance lobby and generous corridors were given scant consideration. The principal's office was little better than a hole in the wall large enough to hold a small table, a couple of kitchen chairs and a nail on which to hang his coat.

As for a teachers' room, a space the size of a good size cupboard was considered sufficient. The supply rooms, book rooms, supply cupboards, etc., were poked into the remaining unused space.

The school of today requires not only adequate classrooms, but project rooms, cloakrooms, comfortable well lighted principal's office and large airy teachers' room. In addition, good supply rooms with ample shelves, drawers and cupboards, and bookrooms, are necessities. An area the size of a class-

room is now required for the medical rooms containing a room for the nurse, the doctor and the dentist.

Playrooms for the use of boys and girls in which to play in inclement weather and in which to learn folk dances, play group games, etc., are a prime requisite.

With all the added features in the modern school, the cost factor therefore becomes a very serious matter.

Ways to Reduce Costs

To keep down construction costs then, must be one of the first considerations of the school architect and the education officials. The number of appurtenant rooms should not be reduced, so ways and means must be devised to accomplish the best results at the least cost.

No longer should schools be of the massive forbidding type burdened by masses of cut stone, nor should they be set up on high pedestals formed by unnecessary and unused basements, and approached by long flights of steps.

The modern school costs are reduced by keeping the building low to the ground and eliminating basements, except just enough to house the boilers and fuel. In design, cut stone and ornamental cornices are omitted and the style becomes beautifully simple, straightforward and functional, full of grace and simple dignity, but devoid of frills and costly ornamentation.

Structural Simplicity

In the Montgomery Park School, the main floor of the building is but two steps above the grade. There is no basement, except the boiler and coal rooms.

One of the most effective savings of time of construction and of cost is by the use of a skeleton frame. Instead of the laborious wall bearing job, where all interior and exterior walls must be carried up to their full heights before placing beams and roofs, the structural skeleton frame can be erected, the roof put on and made weathertight before walls are started. Immediately, all trades such as electrical, plumbing, heating and air conditioning can get busy.

The exterior walls instead of being heavy bearing walls, are light curtain walls and can be erected in several different places at once, according to the requirements; windows can be set and glazed and parts of the building closed in. When the weather is bad the bricklayers can work on interior partitions which, because they are not load bearing, can be of lighter construction.

Wall Heights Reduced

When mechanical ventilation is used, high ceilinged rooms are unnecessary. Ceiling heights of 10' 8" have been found to be quite adequate.

All ventilating duct work is carried in the corridor ceilings, which can be furred down to permit of ducts of economical sizes, thus eliminating the expensive broad, shallow ducts with expensive turns and crossovers.

Roof levels are kept down, parapet walls instead of being 3 to 4 feet high are only several inches above the roof decks.

All entrances are of simple construction, having

large glass surfaces but are exactly alike for purposes of economy.

The Interior

The classroom floors are of concrete joist and hollow tile construction, with a concrete surface covered with mastic tile in light shades.

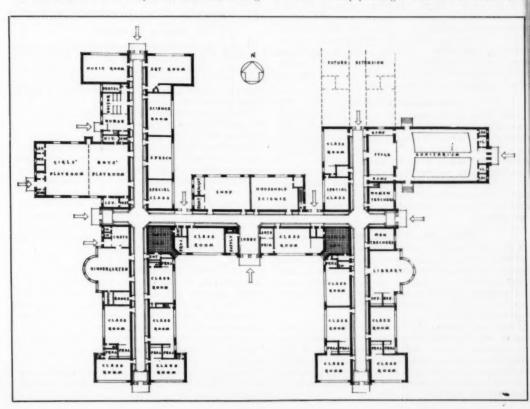
In corridors and washrooms, the floors are of terrazzo, which is a most desirable type of floor. They are not expensive and are bright and pleasing and easily kept clean. Elaborate designs in terrazzo floors are costly.

Probably the greatest saving of construction time and money is made in the choice of wall and ceiling finishes. Plastering is almost entirely eliminated.

The walls of classrooms, corridors, washrooms, playrooms, auditorium, etc., are to be finished with Haydite cement blocks which have a surface of uniform texture and color and are laid up in simple and pleasing design using 3 standard sizes of blocks. These blocks also have excellent acoustical properties.

In the classrooms, the walls will be tinted, using tones that have pleasing colour effects and good light reflecting qualities. In all other areas, the walls will be left in their natural colour.

Dadoes in all classrooms, corridors, playroom, toilets, etc., will be of cement enamel in bright pleasant colours applied directly to the Haydite blocks. The effect is very pleasing and makes one of the most



durable finishes possible to procure. The cementenamel will be carried down to the floor, thus eliminating the costly terrazzo bases.

Wood trim such as doors, casings, blackboard trim, etc., will be of birch and given a very light stain and good varnish finish. This type of light finish not only looks good, but over the years requires a modicum of refinishing whereas paints and enamels peel off and dark varnish finishes soon show mars and scratches.

Suspended Acoustical Ceilings

There will be no plastered ceilings in the entire building. The classrooms, corridors, playroom and auditorium will have suspended acoustical ceilings consisting of a 2'-0" x 2'-0" square sheet of perforated board suspended on light metal channels and having a backing of rock wool pads.

In other areas where acoustical treatment is not required, the ceilings will be of similar panels of transite board, they will not be perforated.

Transite boards are hard, indestructible, fireproof

and take an excellent paint finish. The acoustical panels being perforated can be painted endless times without affecting the acoustical properties.

There is little difference between the cost of the suspended transite ceilings and plastered ceilings, but the time saved in erection is very considerable. Also the 2'-0" x 2'-0" square panels are easily removed and replaced, thus permitting economies not possible with plastered ceilings. Electrical conduits, ventilating ducts, heating pipes etc., are readily accessible for alterations or repairs, when installed in the ceiling space. The tearing out of plastered ceilings to get at a leaking rain water conductor or water pipe, or to make new connections to electrical mains is completely eliminated. Leaks occurring in roofs have no effect whatever on the transite board.

Glass Replacement Reduced

Steel sash having comparatively small lights have been selected to reduce the cost of replacing broken lights. Also instead of the usual double diamond class, 32 ounce sheet glass is used as it stands much harder blows and is not much more expensive.

In playrooms, where the doors and windows are subject to extra abuse, wired glass is used. This overcomes the necessity of using wire window guards which are expensive to install and make window cleaning difficult.

Heating and Ventilating Savings

For ventilating the school, instead of the large and elaborate central ventilating unit with their big costly motors and long and expensive duct systems, we are using a number of small completely housed and weatherproof roof fans, each ventilating not more than 3 or 4 rooms, with similar small units for toilet rooms, playroom, etc.

These small units greatly reduce the duct work, require only fractional horse power motors which are not expensive to buy and are cheaply repaired. A breakdown of the motor in a large central unit means the shutting off of all mechanical ventilation whereas with the small units, the greater part of them will be constantly in operation.

A further advantage is the great saving in power, as, where temperature and wind conditions are favorable, the windows can be opened and no mechanical ventilation is required, so the teachers can operate the system only when necessary.

For heating, high speed forced circulation hot water is used, which permits of small size pipe and eliminates the expensive steam traps which need frequent

cleaning and adjusting.

Hot water provides a low, gentle heat and in mild weather effects considerable economy in operation. The operation is straightforward and simple and the system rarely goes out of order.

The heating units are steel encased convector units which are clean and trim. The expensive Unit Ventilators are entirely eliminated. They frequently are the source of trouble and expense and if not properly operated, blow cold air and otherwise go awry.

By a skilfull use of the new types of draught deflecting windows and the proper operating of the local exhaust fan, any teacher can maintain an ample supply of fresh air to suit all conditions of weather or personal desires in heating, at considerably less cost than required for the installation and maintenance of the large central air conditioning systems.

Further operational economies are effected by zoning the heating system. By careful planning such special areas as playrooms, auditorium, medical room etc., can be heated for night, holiday, or week-end use by the community, without heating the school proper.

Plumbing and Lighting

Main toilet rooms and auxiliary toilets are concentrated and so located as to provide maximum of use with a minimum of large water mains and sewer lines. Where possible, separate toilet rooms are so planned as to be close to the trunk lines, thus saving costly branch lines.

The size and number of lighting units depends on the type of school and its use for daytime and night

classes or meetings.

Fluorescent units are costly to install, but the power saving is considerable. In classrooms, advantages accrue by using a larger number of two tube fixtures in continuous rows, rather than fewer four tube fixtures spaced apart.

Economies in corridor lighting are made by careful spacing of the lights and adequate switching so that it will become habitual to switch on *only* those lights required for use in the darker areas where natural light is not sufficient.

Preparation of Plans and Specifications

Considerable saving can be accomplished by the careful selection and application of materials and ways and means devised for the saving of labor, but much of these savings can be dissipated by lack of intensive study in the general planning by the education officials, and by the architect failing to produce a carefully prepared plan and a complete concise specification.

Inadequate plans and carelessly written specifications can have but one result—confusion and high tenders.



CHESLEY HIGH SCHOOL

Chesley, Ontario

PRE-FABRICATED CONSTRUCTION — (Steelox Interlocking Panels)

N a rise of ground at the edge of the Town of Chesley, Ontario, stands the new Chesley High School—an 8-classroom structure with accommodation for 240 pupils. Walls, roof and ceiling of the one-storey, H-plan building are of steel; the foundations are of concrete block, the floors of concrete slab laid over a cinder base. The oil-heating unit is housed in a separate boiler house with oil storage tank sunk below ground level.

Incidentally, it is the eighth (and largest) school building in the Province of Ontario to be built of Steelox interlocking panels.

The order for the Steelox material was given in the first week of November, 1949, and by the end of the month all of it was "on location". Erection of the Steelox shell was completed in about three weeks by ordinary construction workers, who put in between 1,000 and 1,200 man-hours of labor. The building was completely finished and equipped in time for occupancy after the Easter vacation.

Besides saving the Chesley Board of Education considerable money, the adoption of this largely prefabricated type of structure by the Chesley Board of Education, met an emergency arising from the destruction by fire of the old combined public and high school. Shortly before this, the erection of a new brick public school was begun. The Board now found itself confronting the double-barrelled problem of providing

accommodation for high school students also with all speed, and as economically as possible.

George Hardy, Limited, Toronto contractors, were consulted about the feasibility of using a prefabricated type of construction and still meeting physical requirements, with a consequent saving in costs. The firm had had some experience with Steelox in connection with industrial buildings, and suggested investigating this material, which had already proven satisfactory for school buildings elsewhere. Specifications were drawn up, and the Board retained J. E. Assheton Smith, Toronto architect, to supervise the architectural features. The architect and the Armco engineers together worked out the details.

Steelox construction consists of panels of special coated steel, 20 and 18 gauge in thickness and 16 inches wide, with flanges along each edge which interlock on the inside to make a continuous steel wall, roof or ceiling. The panels are tied tightly together by narrow steel angle strips bolted across the top and bottom width. Wooden furring strips nailed to the flanges on the inside with special hard-steel helical nails provide an anchor for any desired type of interior sheeting or for lath and plaster. The Steelox panels come from the fabricating plant at Guelph, Ontario, ready prepared by a special process for painting, without the need of a metal primer.

The Chesley High School, built in three connect-

ing units in the shape of an H, each with ordinary gable roof, has a total floor area of about 8,500 square feet. The two outer wings (135' x 28' and 129' x 28' respectively) contain the classrooms, four in each wing, with 7'2" connecting corridors, one side of which is lined with metal lockers. Six of these rooms have each a floor area of roughly 21' x 35', one being equipped for use as a science laboratory with built-in sink, etc. The remaining two (36' x 28' each) are respectively for home economics and manual training, with appropriate built-in equipment. All these rooms have a ceiling height of 12 feet. In the connecting wing (40' x 28'), with a ceiling height of 8 feet, there are (on either side of an 8' corridor), a principal's office, a teachers' room, a store room, and boys' and girls' washrooms.

Four outer doors open off the main corridors of the side wings into front and rear quadrangles, but the main entrance is in the connecting section facing the front. The doors are of heavy woodslab construction with plain surfaces, set in wooden frames. A pleasing architectural effect has been attained by recessing the main entrance above a concrete step.

No wood framing is required to support roof, walls or ceiling. The Steelox superstructure is anchored to concrete block foundation laid four feet below frost level and rising a few inches above grade, with a floor of cinder-based concrete slab over which mastic tile or linoleum can be laid. Outer walls are sheathed nside with one-inch fibreboard laid over wooden furring strips attached to the flanges of the panels, and backed by a vapor barrier as a protection against condensation. This leaves an air space between the wallheeting and the steel walls, and provides combined insulation and interior finish which can be decorated in any manner desired. Inner partitions are of 2" x 4" studding covered with half-inch fibreboard. Walls are surrounded by a four-foot-high dado of Masonite and wooden baseboard. The ceiling throughout is of Steelox panels over which is laid a 3" layer of Fiber-

glas insulating batts. Ventilation is assisted by revolving-head ventilators set on the roof ridges and a small louvre located in the end of each gable above ceiling level.

Lighting, both natural and artificial, has not been stinted. The window area is ample to provide good natural lighting. Frames are of steel, and the glass is set in steel sash of the projection type which can be screened on the outside. Each classroom has a window area of 160 square feet; window area in the home economics and manual training rooms is, in each case, 224 square feet. Windows are shaded by venetian blinds. Artificial lighting in classrooms is of the fluorescent type, 1200 watts (the equivalent of from 24 to 30 foot-candles) to each room. The other rooms have incandescent lighting.

Heat is supplied to the building through thirty-four convector radiators fed with steam by pipes from the separate boiler house in the rear, whose floor is four feet below grade. Considerable installation time and labor were saved by adoption of a Napanee combination boiler and oil burner with base attached, forming a single unit. Fuel oil is stored in a 2,000 gallon tank below ground level outside the boiler house. All main water, heating, and sewage pipes are laid below the concrete floor slabs, and have welded joints and waterproofed insulation wrapping.

The net result of choosing Steelox construction is that Chesley has been able to replace its razed publicand-high-school with a high school building adequate to its immediate needs, in a minimum of time and at a saving in cost.

The Chesley school is the largest Steelox school building to be erected in Canada at the date of writing. Edmonton has a six-room school embodying a similar H-type plan; some of the others are: a five-room school in Guelph, Ontario; and four-room schools in Kenville, Manitoba and St. Laurent, a suburb of Montreal.

BANTING MEMORIAL HIGH SCHOOL

also entered from a secondary school entrance and from the main corridor of the school. A full size stage, 16' deep from the proscenium arch, is built at the inner end of the room accessible from the main school corridor. Storage on dollies is provided under the stage for folding chairs. Dressing rooms, locker, shower, and instructors' rooms are provided for boys on one side and girls on the other side of the gymnasium. Washrooms and the school cafeteria and kitchen are located immediately across the main school corridor, thus completing a self-contained community section.

Accommodation for the full composite school curriculum includes, besides the above mentioned facilities, home economics department, sewing room and storage, general shop for farm mechanics, agricultural science room, general science room, library classroom, two commercial classrooms, art classroom and six standard classrooms. As this accommodation is only capable of handling the initial estimated at-

(Continued from page 38)

tendance of 420 students, provision has been made for the extension (see plans) of an east wing from the administrative centre for as many classrooms as are needed.

It is planned to supply students with one hot meal a day, and as the cafeteria and kitchen are not too large this service will be in shifts.

Acoustic tile or plaster are used throughout the school. Floors are terrazzo in corridors and washrooms, linoleum in the home economics room and library and mastic tile in classrooms. All classrooms are ventilated through the lockers. Separate ventilating systems are provided in the gymnasium and washrooms. Heating is by convectors. Lighting is 60 cycle fluorescent throughout the school, supplemented in classrooms with special blackboard lighting facilities.

At present three buses serve the district to bring country students to the school.

THE DEVELOPMENT OF VOCATIONAL EDUCATION IN CANADA

VOCATIONAL education, in the sense of technical and practical training as a basis for gainful employment, is an institution of comparatively recent growth in Canada, and it is still not equally

available in all parts of the country.

Under the constitution, education is within the jurisdiction of the provinces. The Dominion Government, however, has the responsibility to the country as a whole of ensuring an adequate supply of workers to maintain and increase the output of our industries. This, coupled with a vital interest in furthering equality of opportunity for everyone, regardless of the province in which they live, suggested contributions of Dominion funds to the establishment and upkeep of vocational schools on the general basis of the distribution of the youthful population.

* * * *

Dominion assistance has been provided under a series of Federal Acts, the first of which was passed in 1913. The latest and most comprehensive of these is the Vocational Training Co-ordination Act, passed in 1942 and amended in 1948. Among its provisions is one authorizing the Minister of Labour to enter into an agreement with any province to provide financial assistance for the development of vocational training up to the secondary school level. Under this section of the Act the provinces and the Dominion entered into Vocational Schools Assistance Agreements in 1945, by which the Dominion was to provide the sum of \$30,000,000, over ten years, for vocational education.

This sum is being distributed in three ways—as an outright grant of \$10,000 annually to each province, as an annual allotment of \$1,910,000, divided among the provinces in proportion to the size of their populations in the 15-19 age group, and as a special allotment of \$10,000,000 for capital expenditures on buildings and equipment. All expenditures except the out-

right grant are matched dollar-for-dollar by the provinces.

During the five years they have been in effect, these Agreements have given a marked impetus to the development of vocational school facilities. Projects have been approved for 34 new buildings and for 71 building extensions, while under the annual allotment of the Agreement contributions are being made to 190 vocational schools—37 in British Columbia, 3 in Alberta, 21 in Saskatchewan, 7 in Manitoba, 49 in Ontario, 56 in Quebec, 15 in New Brunswick and one in each of Nova Scotia and Prince Edward Island.

*. * * *

At the beginning of October the total enrolment in Canada in day vocational schools was about 60,000 and in evening classes about 65,000, and both totals are increasing rapidly as new schools are opened. Subjects are taught in about sixty fields, ranging from aeronautics to upholstering and including the building trades, agriculture, commercial work, home economics and service occupations. The funds from the annual allotment are generally used for operating costs such as teachers' salaries, expendable items of equipment and vocational supplies, administrative costs and bursaries to students.

There are many would-be students in Canada who, for social, economic or geographical reasons, are unable to attend organized vocational classes. For these persons, correspondence courses are the only means of instruction. The preparation of such courses is costly, and, to reduce the expense and avoid duplication, a co-operative scheme is being worked out under which it is planned that the Department of Education of each province will draw up one or more courses and make them available to other provinces. Quebec has offered to supply, to French-speaking students anywhere in Canada, courses prepared in French.

HIGH SCHOOLS MUST INTEREST AND HOLD STUDENTS

(Continued from page 27)

observe reasonably high standards of conduct.

This kind of training for citizenship does not occur by accident or without careful planning. It requires the most complete knowledge possible of the individual pupil, of his background, of the community and of its current moral and social problems. May I suggest that in the planning required for successful citizenship training you may easily come upon invaluable clues to the motivation which we have already accepted as an essential to an effective school course? I do not only mean that you may discover interests of individual pupils which you never before suspected. I mean, too, that it is a characteristic—perhaps a peculiarity—of the pupil of high school age that he responds with enthusiasm to an opportunity to be useful, to a challenge to sacrifice for an objective which he considers important. Let us not scruple to use this tendency to further the pupil's best development. Sir Alfred Zimmern, whom one simply cannot avoid quoting, tells us that democracy needs fully developed individuals; repeatedly he implies that no individual is fully developed until he has formed the habit of recognizing his obligation to his fellows.

To recapitulate, it is my conviction that the Canadian public has not waited for the educator to define the aims of secondary education. The public has already started to state those aims. As one might expect, the stated aims are confused, perhaps they are conflicting. But they can be harmonized by prompt action on the part of the educators. This is, indeed, our next necessary step. To discern how to motivate strongly many types of young people, and at the same time to habituate them to exercise free will in the full recognition of social obligation and moral duty-this is the target for today. Shall we be too surprised if it turns out that these are not separate and distinct aims, but only complementary phases of the same momentous effort?

ST. LAWRENCE HIGH SCHOOL

The double gymnasium-auditorium, 60' x 80', and stage are so planned that it is bounded by corridor on three sides, the fourth side being completely taken up by adjacent dressing and shower rooms and gymnasium instructors' office. The gym is divisible into boys and girls gymnasia by an electrically controlled sliding-folding soundproof partition, which when not in use folds back into a pocket and is completely hidden and thus offers no obstruction to gymnasium activities. Each of the instructors' offices is located so that complete supervision of the gym floor is possible through armour-plate glass windows. Exits from the dressing rooms lead directly to the playing field.

The stage is planned so that adjacent classrooms are available as dressing rooms. The stage is provided with fixed ceiling spot lights, footlights and stage lights all on separate dimmers. Lighting for the entire auditorium and stage can be controlled by one operator from a location on the stage. Chair equipment storage spaces are provided.

The cafeteria is located immediately over the dressing rooms and the side adjacent to the gymnasium is open so that spectators may use this area as an observation gallery. Additional natural light is thus also obtained in the gymnasium.

(Continued from page 33)

The school is completely ventilated by an exhaust system. In addition the auditorium, dressing rooms and showers are supplied with pre-heated air, each of these rooms being individually controlled for the varying temperatures required.

The program sound system provides radio reception, recorded programs and microphone pick-up, with provision for distribution to any or all of the speaker locations. A secondary sound bay located on the gym-auditorium stage provides a separate channel for sound in the gymnasium and by being connected to the main system permits the distribution of programs originating on the auditorium stage to all stations. Two-way intercommunication is provided between classrooms and the general office and principal's office. Privacy switches are installed on classroom stations.

The time control system consists of electronic equipment which introduces pulsations in the electrical feeders so that by plugging receiving equipment into any electrical outlet the signals may be picked up. This is of distinct advantage insofar as future extensions are concerned since time signals will be available without further special wiring or disturbance of the existing system.

HEATING, VENTILATION, PLUMBING, ELECTRICAL

It is very difficult to compare the cost of these heating systems in general. It depends so much on the local conditions, so that every job should be considered on its own. It will be interesting to mention that a radiant panel heating job in a single storey basementless school, using steel pipe coils embedded in the concrete floor, is at least equal to, or lower in cost than a forced hot water system, particularly if it is taken into consideration that no expensive pipe trench is needed for this system.

With a ventilating system we attempt to provide healthy and comfortable conditions for the students. A good job should be noiseless, draftless and inconspicuous, leaving the student free from all distracting influences.

Some designers prefer very elaborate systems with heated air supply, re-circulation with air washers and an exhaust system. The fact is that in many cases, systems like that have been installed and after a short time are not used because the operation of such a system means a considerable amount of fuel expense.

Today, very often architects, owners and engineers, compromise on an exhaust system only with air supplied by opening of windows. My preference would be for a perforated ceiling, through which a controlled

TLBURY DISTRICT HIGH SCHOOL

to participate in a literary drama or sports programme. We seat Grade IX in the balcony, Grade XI on the west side downstairs, Grade X on the east side downstairs, and Grades XII, XIII, Special Commercial on the stage. Our glass backboards permit this seating with full view of a game.

The Auditorium programme also provides opportunity to use the work of the other activity groups

(Continued from page 37)

amount of outside air could be admitted and exhausted at floor level. The very common standard of 30 C.F.M. fresh air per student is continuously being reduced and at this moment, the tendency is toward 10 to 15 C.F.M.

Plumbing

The plumbing requirements are governed by local conditions and plumbing codes. Fixtures should be as sturdy as possible and designed to prevent all possible splashing around them. Bradley type wash fountains are gaining wide acceptance and toilets with flush valves are in general, replacing tank toilets. Cleanliness and good ventilation are conditions which must be satisfied on any plumbing installation.

The aim of the consulting engineers is to provide the best conditions at the lowest cost. The big question is what are the best conditions. Whose preference has to be satisfied and how are the costs being influenced by the various demands? Therefore, in our designing work, we are practically forming a committee under the chairmanship of the architect and the school design is the result of the co-operation and work of this committee for the greatest benefit of the modern school.

(Continued from page 30)

such as choir, literary, drama, public speaking, debating and student parliament.

Student Parliament

Meetings of the Student Cabinet are held as a special assignment during one activity period per week. This is held on a different day each week in order to avoid too many conflicts with the other activities of the students.

Back to

A SOUND PHILOSOPHY OF EDUCATION

HELMER G. JOHNSON, University of Minnesota

From an Article in "School and Society"

IFE among the early American Indians was simple. Since they had no great amount of heritage to pass on to each new generation, education also was very simple. For the most part, it consisted of activities so dear to the hearts of certain "modern" educators of today. Among other things, the young girls were taught how to weave baskets, shape vases, and make moccasins; the boys had to learn how to hunt, fish, and build canoes. Education was very informal; there were no tiresome drill on arithmetic operations, no spelling or reading assignments. The "stifling atmosphere" of our traditional school, which, we are told, has killed the interest and motivation of many a budding genius, was entirely lacking. Yet, and this should seem strange to progressive educators, the Indians made little progress, socially or scientifically.

In every age and amongst all peoples, the purpose of education has been to transmit the social heritage, to pass on the accumulated wisdom of the ages to each new generation. If we did not have any social heritage, if we did not have any civilization, we would not need any schools, for there would be nothing for children to learn. As our civilization becomes more and more complex, our education must become more and more formal and concentrated. With life as complicated as it is nowadays, children need 'more than informal training and firsthand experiences if they are to cope successfully with the problems that will confront them during their lifetime.

What is arithmetic? What is language? History? Mathematics? What are standards of conduct? These are part of our social heritage which we pass on to the next generation. Does not education concern itself with these things? Is it not the purpose of our schools to teach chil-

dren how to read and write? Is it not the purpose of our schools to enable children to acquire knowledge and skills so that they will become more useful citizens and have a better understanding of the world in which they live?

Although the answers to these questions seem rather obvious, there exists wide disagreement as to the aims and purposes of education. Many educators reject the philosophy and practice of the traditional school. A quotation from John Dewey will illustrate this opposition: "The traditional scheme is, in essence, one of imposition from above and from outside. It imposes adult standards, subject matter and methods upon those who are only growing slowly to maturity."

This imposition from above that seems to be so distasteful to progressive educators is a law of nature. We cannot change it even if we wanted to. Children are born into this world helpless and dependent on the care of adults. Until they acquire, through experience and formal training, a proper sense of values, they must depend on adults not only for the food that they eat but also for the type of education they receive. The mother who lets her five-year-old daughter prepare the noon-day lunch may find stones in the soup, sand in the cake, and all kinds of strange and weird dishes. Likewise, the schoolman who lets young children prepare their own educational menu will encounter some methods and practices that could hardly be considered sound. If children are not capable of preparing their own meals, they are not capable of preparing their own education. This means that imposition from above and from outside is unavoidable, and adults must decide what sort of education children are to Most of our schools during the past 50 years have been of the traditional type. During this period we have made greater progress than during any period of the same length in the history of the world. Does this indicate that the men and women who graduated from these schools were harmed by the restrictions and limitations placed upon them in our classrooms?

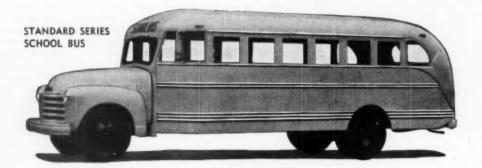
There is little doubt that nature has endowed children with plenty of "antidotes" so that they are not harmed by the impositions and restrictions put upon them in our class-tooms, especially when these have been "imposed" with the moderation and understanding that have characterized our schools for the past half century. A child that is repressed soon "bubbles" up again.

That old saying among traditional school teachers, "Experience is the best teacher," has been taken up and given an emphasis far beyond what its importance warrants. Educators of the past recognized the value of experience, but they also recognized the value of formal training and instruction, especially in a complex civilization. They knew that real, true-tolife experiences were best achieved outside the classroom, and that the main function of the school was to furnish formal instruction. Until challenged by Progressives, the accepted theory of education was that schools are built and maintained so that children can obtain skills and knowledge which are necessary for existence in a complex world and cannot conveniently be obtained elsewhere.

After a people have achieved greatness there seems to be a tendency for them to become disdainful of the methods by which they become great. Our progress in recent years has been phenomenal and we have attained a very high state of civilization. This has been accomplished with the aid of our traditional schools. Today many educators view with scorn an educational theory that is largely responsible for our great progress.

This is a great nation and we are a great people. If we become too scornful of the methods by which we achieved our greatness, historians of the not-too-distant future will be writing about "The Rise and Fall of the American Republic."

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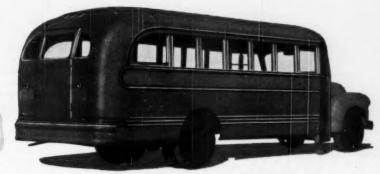
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vides greater strength, and permits easy replacement of body panels if necessary. Inner panels, sides and roof are insulated against heat, cold and sound with V_8 " asphalt impregnated waffle felt permanently attached to panels. Interior height 71½"—interior width 91½"—minimum seat (centre) spacing 28". Optional equipment includes front roller destination sign, sedan door, hanger rails, baggage racks as well as various type seats. Available for any kind of service.

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THE SPOTLIGHT ON EDUCATION

A Needed Attribute of the School Principal

Of all the factors that make for a "good" school there is, in my estimation, one that will operate more surely than any other—effective leadership. And of all the attributes of effective leadership none seems more important than effective, or, if you will, creative imagination.

Emphasis has commonly been placed on such elements of leadership as the ability to get co-operation, flexibility and open-mindedness, technical proficiency in educational matters, managerial ability, and others. The priceless ingredient that gives life to all of these—imagination combined with initiative—apparently has been too often taken for granted. Anyone who studies schools must realize that it cannot be considered so casually.

What is this effective imagination, that it seems so necessary? To me it is the ability to see beyond what is to be seen, to explore what is over the horizon of the present situation, and then to do something about it. Dreaming without action is a waste of time and the taxpayers' money.

Granting that some are original thinkers but that more of us are reasonably good adapters, how can one determine whether a modern principal has imagination combined with initiative? When one is studying a school at first hand, the answers to a few simple questions show its presence or absence: Do the classrooms show examples of original work on the bulletin boards as well as the common purple-outlined models coloured in by the pupils? Do children play aimlessly on the playground, or is there a plan of guided, developmental activity in progress? Do the pupils help the principal to solve problems concerning their affairs?

Some other indications: Does the lunchroom look like a prison mess hall, or is there an atmosphere of informality in which the teachers participate? Are there pictures on the walls, flowers or greenery on the tables, perhaps even a record-player and records appropriate to the interests and presumably improving tastes of children of various ages? Does the community generally feel that the school is as much theirs as it is the principal's, the faculty's, or the board's?

An almost unfailing indication of a lack of effective imagination is evident when a principal says: "Yes, I know we have poor lights, but I can't do anything about it. There isn't any money for new lights." Or he may say, "Well, I've reported it to the superintendent; what else can I do?"

These are only a few of the evidences that show a lack of effective imagination so plainly to the observer as to be almost an indictment of the principal of his own fitness for his position as a leader.

Hundreds, perhaps thousands, of principals have done something about almost everything we can find that "can't be done."

All that is necessary is to practice looking for what one does not see, and then begin to think what he can introduce into the picture, and how, that will improve his school. Imagination alone is not enough, nor is

the sheer ability to adapt, though these are starting points. With these must be combined the courage, will, and skill to initiate and carry through—to start a fire and keep it burning.

A word of warning should be sounded, however. No one should attempt to do in one year what may take three to accomplish. Nevertheless, a principal can be judged by the conditions with which he is satisfied. A principal or other school administrator should be pitted not for what he does not have but for what he does not miss.—From School and Society.

Indian Province to Open Classes for 25 Million Adults

Twenty-five million adults will go to school under a mass education program now being drawn up by the United Provinces government in India,

The plan, which is expected to operate for 10 years, calls for adult pupils to attend classes one hour a day for six months. Although literacy training will be stressed, instruction also is planned in such subjects as agriculture, hygiene and civics.

Comic Books Help U.S. Education Experiment

Ten million children in the United States are following the new adventures of Buzzy, a comic book character with an educational mission.

Buzzy is the result of an agreement between one of the largest American publishers of comic books and the National Social Welfare Assembly, made up of parents' groups and child welfare organizations.

Buzzy first appeared in his new role in September, when he urged his young followers not to cut short school careers at the risk of sacrificing their future lives. He is part of an experiment to make constructive use of the tremendous influence of comics upon children.

How To Kill An Association

The following ten ways to kill any association, educational or otherwise, came to our attention recently and are highly recommended to do just exactly what the title claims:

- Don't attend meetings—but if you do, always arrive late.
- If the weather doesn't suit you, don't think of attending.
- 3. When asked to help, pass the buck to the officers.
 4. If you don't attend the meetings, find fault with the
- If you don't attend the meetings, find fault with the work of those who do.
- Get sore if you are not put on a committee; but if you are, do not attend its meetings or do any work.
- If asked to give your opinion, tell them you have nothing to say. But afterwards, tell everyone how things should be run.
- Never accept office. It's much easier to criticize what others do than to do anything yourself.
- When others work unselfishly for the Association, howl that it is being run by a clique.
- Don't bother trying to enroll new members—let others do it.
- Never pay your dues—you might get something for nothing.



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SOME REVIEWS OF SCHOOL AND EDUCATIONAL BOOKS

An Important Bulletin Service on Physical Fitness

The Physical Fitness Division of the Department of National Health and Welfare, Ottawa, offers schools and communities an exceedingly valuable information service on all sorts of problems relating to sports, hobbies and recreational activities about which Canadian educators and teachers should know more. We, therefore, take this opportunity of outlining below the functions of the Fitness Division and note some of the bulleting, reports and booklets on subjects of special interest to schools which are available on request.

The Physical Fitness Division was set up within the Department of National Health and Welfare to administer the National Physical Fitness Act and to implement the policies and projects initiated by the National Council on Physical Fitness.

The Division does not operate a programme. The actual carrying out of physical fitness and recreation projects is a provincial and community responsibility. It acts as a clearing house to disseminate among the provinces the latest information on physical fitness, recreation, physical education, community centres, drama, sports and allied activities. Close liaison has been developed and maintained with foreign countries and with countries of the Commonwealth, facilitating an exchange of publications and information on the latest developments abroad.

Reports on Recreation, Physical Education, Leadership Training, Community Organization and Programmes are prepared with the co-operation of the Provincial Directors and Departments of Government. Research projects and surveys are conducted in Fitness, Recreation and Physical Education. The Division prepares and publishes pamphlets and booklets on many phases of fitness, recreation, physical education, cultural activities, community recreation, and research proiects. A comprehensive bibliography of federal and provincial publications is available on request. The production of instructional films and filmstrips on the promotion of Community and Family Recreation, Growth and Development, Theatre Arts, the techniques for Sports and Games, and a number of other subjects is carried on in co-operation with the National Film Board.

A preview film library service is maintained to afford possible purchasers an opportunity to view selected 16 mm. films. National and Provincial screening committees critically assess films from all possible sources. Digest sheets are prepared on the choice ones and sent out in advance of the blocks which are circulated to the main cities of the Dominion. A most comprehensive film catalogue is now available.

Bulletins on Sports and Athletics

Pre-School Play Areas — Plans of various types of play areas, with and without shelters, illustrated with photographs. Contains complete list of provincial directors of health and recreation.

Equipment for Outdoor Play—Discussion of equipment, listing kinds suitable and containing plans for the construction of such items as sandbox, slide, climbing horse, jungle gym, etc. Construction and Maintenance of

Baseball Diamonds—Full instructions. Sports and Athletics in Other Countries—Two volumes containing information on the organization and administration of sports and athletics in countries outside Canada. Volume I—Australia, New Zealand, South Africa, Sweden, Switzerland, United Kingdom. Volume II—Belgium, Brazil, Ceylon, Egypt, France, Iceland, Turkey.

National Aquatic Standards for Canada — Leaflet giving all data for tests and standards for instructors.

Olympic Rules-International Olympic Committee, Lausanne 1949.

Cultural Activities

Better Stages in Community Centres and Schools, by Herman Voaden—Instructions as to the basic requirements of a good stage and specifications on lighting, etc. Illustrated fully by diagram.

Helpful Hints in the Design and Making of Costumes.

Make-Up for Stage Productions. List of Recommended One Act Plays.

Motion Picture Films on Fitness

Here's How to Do It—catalogue of recommended 16 mm. films on:

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- For copies write Physical Fitness Division, Department of National Health and Welfare, Ottawa.

Encyclopedia of Educational Research, edited by Walter Scott Monroe— Macmillan, \$22.00.

First published almost a decade ago, the Encyclopedia of Educational Research, sponsored by the American Educational Research Association, is one of the most important and significant books published in connection with American education. Written by more than 200 authorities and covering every topic of importance in American education from administration to youth problems, it is related to elementary, high school and college levels. It is an indispensable reference book for educational workers as a ready reference source on the achievements of educational research. It provides in one convenient volume a critical inventory of the accomplishments of research over the past fifty years. The articles organized under each topic are addressed to students in teacher training institutions, teachers, supervisors, administrators, professors of education and even interested laymen. The articles are as concise and brief as their purposes permit. Thus, it is a veritable library on education in itself.

The new edition just issued is considerably enlarged and carries a special new feature in an index printed on light green paper stock and conveniently bound in the middle of the volume. It supplies an analytical table of contents as well as references to the details of the research.

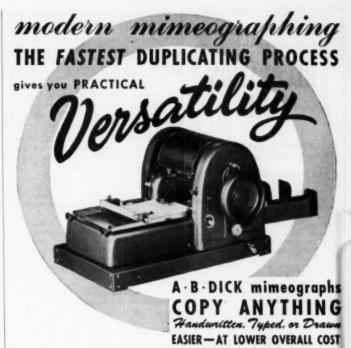
Canadians At Work, by Maynard Hallman-Longmans, \$2.75.

Written for use in the social studies course in grades 7, 8 and 9, "Canadians At Work", should, we suggest, perform a double function: first, it should prove valuable as a book of source material on Canada for class enterprise work, and second, the guidance teacher should find it an excellent introductory reference for young people on kinds of work and occupations in Canada.

The book is organized in three parts: Part 1-Nature's Gift to Canadians, tells the story of natural resources, farming, fishing, mining, lumbering, etc. Part 2-Canadians Using Nature's Gifts, describes how Canadian industries use Canadian raw materials. Part 3—Distributing Nature's Gifts, outlines transportation, trade and commerce and communications. Canadians at Work should undoubtedly serve well the purpose stated for it by its author that "it will be of help to young Canadians for a better understanding and appreciation of the work of our peoples to the young that each may become an efficient and happy citizen".

Living Today, a first book on economics by Norma C. Taylor—Ryerson, \$1.75.

Designed for use in grades 11 and 12 in the high school commercial course, this first book on economics should be valuable in drawing together the strings of study of the first two years of the course and summarizing the part they play in the business world. The author defines economics as "the story of every factor that contributes to the material welfare of man living and working with his fellowman. It tells all about business, how it has grown up, how it is organized, how it functions, and its dependence on co-operation". She compares living today to a great stage



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production for which all students have been studying their parts by learning to type, to take shorthand, to keep books, etc. Now the time has come when their skills must be used. The aim of this book is to give them a preview of the world of work and its activities so that they may enter it with a better understanding of what is ahead. We find the book very interesting and practical and recommend it to the attention of high school commercial teachers.

How Can You Help a Child Like This? Copies on request from the Canadian Mental Health Association, St. George St., Toronto 5.

This little booklet on the mental health of children has been especially written for Canadian teachers. Its purpose is to present in problem form to the teacher some of the most common situations demanding a functioning knowledge of the principles of mental hygiene. A range of situations are described and three solutions suggested in each case from which the teacher may judge the best one for use in the case in hand.

Words by Margaret S. Ernst — Mc-Clelland & Stewart, \$2.50.

In this easy to read little volume the author, who used her method successfully for many years in the city and country schools of New York. suggests that by studying the game of how words grow, how they change and why they are brought together, one can learn to spell in a far more sensible and amusing way than in memorizing long lists of words. Most school children undoubtedly think of modern English spelling as disagreeable and wilfully concocted by grownups to confuse children. By her method the author leads pupils to discover that words are interesting. When they begin to know which ones belong to the same families and who their forefathers were, words can become a fascinating study.

We suggest that Canadian teachers might well find this little book offers a very intriguing approach to a usually dull if not difficult subject to teach.

Your Child Leaves School — Canadian Education Association, 206 Huron St., 75c.

Your Child Leaves School, Report No. 2 of the Canadian Research Committee on Practical Education is a study of 12,124 graduates and 14,219 drop-outs from Canadian schools (grade 7 up) during the year 1948. It in perhaps the most important single piece of research on educational problems to be issued in Canada in recent years, for it has brought to light a critical situation in the functioning of our public school system-the fact that it does not interest and hold Canadian youth as it should. Here are some significant figures from the report: 73,000 pupils leave Canadian schools before graduating each year. Out of every 100 boys and girls starting

school, only 22 finish high school and only 3 graduate from college. The research committee made up of representatives from business, industry, agriculture, labour, the home and education finds that there is a widespread feeling that our secondary school curriculum is not adequate for present day needs and that it should have a wider and more practical content, but, at the same time, that practical education does not mean technical education to the exclusion of general and cultural education. The committee evidently has in mind an educational programme which is practical as a preparation for young Canadians to face life in Canada today.

It is our opinion that every educational administrator particularly, and teachers generally should obtain and study this report not only for the data it supplies on the effectiveness of present day teaching, but also as a significant expression of Canadian public opinion as to its effectiveness.

After School Use of Buildings, Association of School Business Officials, Kalamazoo, Michigan.

Practices of selected school systems in regard to the use of school buildings after regular school hours have been studied by a committee of the Association of School Business Officials. Their report is now available as Bulletin 13 from the Association head-quarters, as mentioned above. The survey covers cities in twenty-six states, the District of Columbia and the Province of Ontario.

The Structure and Aims of Canadian Education, by Dr. J. G. Althouse—Gage, \$1.25.

On his retirement as Dean of the College of Education, University of Saskatchewan in 1948, Dr. Frank Quance established and endowed the, Quance Lectures in Canadian education". The first series of lectures was delivered in April, 1949, by Dr. J. G. Althouse, Chief Director of Education for Ontairo on the two subjects: "The Administrative Structure of Canadian Education and the Dominant Philosophy of Canadian Secondary Education". These lectures have now been published in most attractive book form under the overall title of "The Structure and Aims of Canadian Education". In suggesting the subject for the first lectures in education Dr. Quance laid the foundation of future lectures soundly on the basis of an understanding of educational administration in the Dominion. The committee was particularly fortunate in being able to obtain Dr. J. G. Althouse, Canada's leading authority on the subject, to give these lectures. In so doing, and in publishing the lecture series Canadian literature on educational problems has been enriched. There is not a great body of professional literature on Canadian public education, and this little book is certainly a welcome addition.

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The first lecture, The Administrative Structure of Canadian Education, reviews in concise form the history of the development of the Canadian provincial systems of public education from Confederation to the present day, and draws special attention to the continuing importance of local interest and control of education as a basic characteristic of all provincial systems. Even in the face of general trends towards the centralization of education in other countries, the Canadian trend is still in the opposite direction as seen in the present day development of school programmes to fit the needs of the communities they

In discussing the Dominant Philosophy of Canada's Secondary Education, Dr. Althouse deals with the present revolution taking place in educational thinking about secondary education and the growing evidence of public demand for a more practical school curriculum. The secondary school today is not a professional school but a people's school which all adolescent boys and girls attend. Therefore, the old academic curriculum is not broad enough and the new technical school programme not cultural enough. The present day secondary school must find ways of inter-esting and helping boys and girls and embuing them with principles of good citizenship as well as skill in earning a living. This little volume is one which we recommend for the educational bookshelf everywhere in Canada.

Adult Education and the School, by J. R. Kidd—Canadian Association for Adult Education, 340 Jarvis Street, Toronto.

The Canadian Association for Adult Education has just issued this little booklet on "Adult Education and the School" which we are glad to recommend to school people everywhere. It reviews the story of the development of adult education and the ever-increasing need for it in the modern world, and tells the part schools and teachers can play in making it a success. Adult education is now a third department of the regular provincial departments and it is quite plain that in order to make programs available to the various communities, the school offers the best facilities to meet this

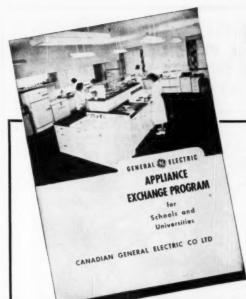
In this little booklet Mr. Kidd discusses adult education as a partner of regular public education, tells about the present situation and interest of the public at large, reviews some working principles of adult education and discusses problems about administration. Its final chapter should be a challenge to teachers as it is entitled "The Teacher or the Leader". There is no doubt that there is a great opportunity for service and personal achievement for teachers in the growing field of adult education.

American Men of Science, eighth Edition. Edited by Jacques Cattell. The Science Press, Lancaster, Pa. American price \$17.00.

American Men of Science, is a biographical directory which has been published at various intervals during the years from 1906 to the present. Starting with 18,000 names in the first edition, the present eighth edition contains some 50,000 names making almost a complete coverage of everyone working actively in science. Now, more than ever before, this volume is important to those who need a convenient reference to the careers of scientific workers and the field of science generally. All information likely to be needed is to be found in the directory, including name, address, subject of investigation, place and date of birth, date of marriage, number of children, degrees with place and date, and previous positions. The present position is indicated by capitals. Other data include minor positions, as well as expeditions, honours, societies with offices held, and the chief subjects of research.

The directory has been a standard reference for nearly forty-five years, bringing together biographies of those who have contributed to the advancement of science in America.

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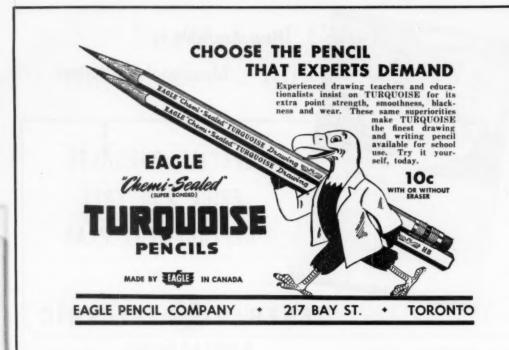
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of 2,900 pages is a valuable addition to the reference shelves of every library and institution.

Science teachers in Canadian secondary schools, many of whom have a deep interest in their field, should, we suggest, have a copy of this directory for their school library, if not for their own personal bookshelf.

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A Project Kit is being made available free to school teachers, upon request to the British American Oil Company. This School Project Kit consists of Cardboard models showing every phase of oil production, for use in social studies at school.

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It is available, free of charge, to school teachers interested, by writing to the Advertising Department, The British American Oil Company Ltd., 108 Peter Street, Toronto.

SHAKESPEARE FESTIVAL Second Annual Open Air Festival, Toronto, by Earl Grey Players

The second annual Shakespeare Festival will be held this year in Trinity College Quadrangle, June 19th to July 15th inclusive. Evening performances will be given of A Midsummer Night's Dream, The Taming of the Shrew, The Tempest and Twelfth Night. Besides the programme of plays there will be a special course of lectures on Elizabethan vocal and instrumental music and social background by Dr. Healey Willan and others, July 3rd-14th; three Sunday evening Elizabethan concerts are scheduled for June 25th, July 2nd and July 9th. There will be a special display of Elizabethan furniture at the

Royal Ontario Museum, and a showing of Elizabethan editions and other Shakespearean literature at Trinity College. Canadian educationists in Toronto at this time should not fail to attend the Festival.

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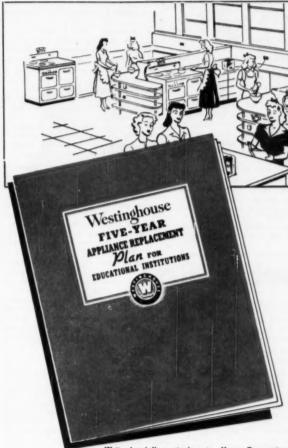
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AUDIO-VISUAL AIDS IN THE MODERN SCHOOL

Commonwealth School Broadcast Exchange Initiated by CBC Now Well Established Success

Exchange of school broadcast programs among Commonwealth countries, initiated two years ago by the Canadian Broadcasting Corporation, has blossomed into plans for a regular system of exchange programs among Canada, Australia, New Zealand, South Africa, Great Britain and Ceylon.

Approved by the CBC's National Advisory Council on School Broadcasting, which recently concluded its annual meeting in Toronto, the enlarged plan goes into effect for the 1950-51 school year. The announcement was made by E. L. Bushnell, Director-General of Programs for the CBC. The overall aim is to make children of the six countries better accounted with each other's worst life.

quainted with each other's way of life. According to details outlined by R. S. Lambert, CBC Supervisor of School Broadcasts, co-ordination of the international school programs will be handled in rotation by the national radio systems involved, with the British Broadcasting Corporation undertaking the work this year. Each of the radio systems will broadcast to its school classrooms the five programs received from other Commonwealth countries, plus its own contribution to the exchange, making a series of six broadcasts. Each broadcast will be from 15 to 20 minutes long, and will be aimed at the ten to twelve age-group.

Broadcasts will be fully dramatized productions on a common theme agreed to by the countries concerned. Tentative theme for this year is "Something we are proud of" and the project envisages the following contributions: from Canada about the building of the CPR; from South Africa about Kruger National Park; from Australia about water pipe-lines or the "flying doctor"

services; from New Zealand about the use of volcanic springs; from Great Britain about the merchant marine; and Ceylon's story about becoming a Dominion.

To be broadcast as part of the regular series of CBC national school programs, the series will be heard over a network of about 46 CBC and privately-owned stations across Canada. As delayed broadcasts, the programs go to outlying stations such as Flin Flon, Manitoba, and Grande Prairie, B.C., and to army radio stations at Aklavik and other points in the Northwest Territories, for Eskimo schools.

At its annual meeting the CBC's National Advisory Council on School Broadcasting also approved the balance of the national school broadcast series for the 1950-51 term. The Council is under the chairmanship of Dr. W. P. Percival, Director of Protestant Education for Quebec; and includes representatives of provincial departments of education across Canada.

Plans call for a full-length production of Shakespeare's "Hamlet" in six instalments; and series on rivers and explorers, Canadian adventure books, common animals and birds of Canada, and an established weekly feature called "What's In the News?" The CBC is considering also the possibility of producing another opera for classroom listening.

Under a new long-range planning system, the Council has already commissioned programs for the 1951-52 school year, subject to final approval at its next annual meeting. The new system allows the Council to consider each year's agenda twice, and gives the CBC time to employ teachers and experts as consultants on each subject.

Regional Geography Teach-O-Filmstrips

A series of six full-color Teach-O-Filmstrips, "Regional Geography", has just been released by Popular Science Publishing Company, Audio - Visual Division. Designed for 5th, 6th and 7th grade geography and social studies, "Regional Geography" is a Richard Nelson Travelstrip.

The underlying purpose of the new Teach-O-Filmstrips is to enable students to absorb the actual flavor of faraway places while developing understanding of their people. The basic concept is that differing ways of life arise out of geographic conditions. In the customs, living conditions, occupations, arts and natural resources of our continental neighbors are shown.

"Northwestern Holiday" opens the

series by showing varied aspects of the

The following three strips constitute a unit: "Mexican Journey, Parts I, II and III". Together, they provide a comprehensive study of our nearest Latin neighboring nation. Fifth strip in the series, "Land of the Mayas-The Yacatan" focuses upon the oldest civilization on our continent, which many consider the most interesting section in Mexico.

"Regional Geography" closes with "Nova Scotia and the Gaspe", an overview of Canada's most fascinating maritime province. Its rugged, seagoing people are seen at work and at play. Influences of their Scottish forbears are traced.

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United Nations Films to Help Unite Nations

The United Nations Film Division has produced, either directly or through the co-operation of Member States, 19 films which are at the disposal of audiences throughout the world, subject to distribution through regular channels. These films are all short documentaries, the screening of which never exceeds twenty minutes. Their aim, their theme, their common ambition, is to produce a better understanding of the need for international cooperation in a world ever more closely knit by the universality of its problems, the speed of communications and the development of mass media.

One film proves that the science of cartography has an important part to play in working for peace. Another reminds people everywhere that sailors, from all nations, are working to ensure the safety of ships sailing the seven seas. Others help focus public attention on the importance of better distribution of foodstuffs in order to fight famine in some countries and to arrest the food shortages which threaten many others. They show how the nations can work together to apply common policies against soil erosion and deforestation. Others, devoted more particularly to the United Nations, explain how the Organization works, the functions of its specialized agencies, its aims and attainments.

These films have been produced in countries situated in different parts of the world: in Poland, Canada, Great Britain, the United States, Sweden, Mexico, Holland, France, and Belgium, to quote the most important of them.

Because of the importance of its subject, it seems right to mention first the film Maps we live by, produced for the United Nations by the National Film Board of Canada. This film helps us to understand how man through the ages has become aware of the physical world in which he lives, thanks to cartography. It is a brief but fascinating summary of the different epochs and phases of civilization, and contains many interesting documents such as the maps drawn up by the conquerors of ancient Rome and by the Chinese and Jews of ancient times.

First Steps, produced in the United States by Leo Seltzer, deals with the problem of crippled or disabled children. It shows how young invalids are taught to walk, to use their muscles, to co-ordinate the movements of their limbs. This picture, which only lasts ten minutes and is one of the

most moving testimonies of its kind, has won an "Oscar" award in Hollywood.

The Belgian director, Henri Storck, has produced a remarkable film dealing with the problem of juvenile delinquency in North-Western Europe, entitled Crossroads of Life. He has been able to paint a living and true picture of a difficult subject without placing the action in any particular country. The characters admirably portray the oppressive atmosphere of this problem.

When an epidemic of cholera broke out in Egypt, the combined action of several nations, notably the United States and the USSR, in providing vaccine and air transport helped to control the epidemic and to arrest its progress throughout the world. This is the story of The Eternal Fight, a Franco-American picture, produced by Madeleine Carroll's film company.

The danger of deforestation is intimately bound up with man's struggle to earn his daily bread. The destruction of forests results largely from reckless deforestation practices permitted by many nations in time of peace, and partly from destruction and neglect in time of war. The only remedy to this problem is a long-term policy of international co-operation. Green Gold, a fine film, directed by the Swedish producer, Theodor Christensen, is based on this theme.

Battle for Bread, produced by March of Time, deals with the world food problem and the part played in this field by the United Nations' Food and Agricultural Organization. A Dutch film, The Sea, My Native Land and a French picture, Lights that Never Failed, are devoted to the solidarity of seafaring folk all over the world. Another documentary, Under One Roof, produced in the United Kingdom, shows the work of engineering students from different nations, all inspired by a common need to understand the different problems of their trade which arise throughout the world. A Mexican film unit has produced the short documentary, That All May Learn, which deals with the struggle against illiteracy.

Lastly, seven documentaries have been produced at the Organization's headquarters at Lake Success. The object of these films is to demonstrate clearly to audiences throughout the world the aims, the methods and the spirit of the United Nations' work.

Rocky Eden — Colour Film — Cameo Series—Associated Screen News

There is a little animal kingdom high in the Canadian Rockies which has been recorded by the motion picture camera for Associated Screen Studios' "Rocky Eden."

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Films From Britain—4 New British Documentary Films, N.F.B., Ottawa, Canada.

As a step towards increasing the reciprocal distribution of Canadian and British films, the National Film Board has recently made an agreement with the United Kingdom Information Office. Blocks of selected British films will be circulated among the N.F.B. regional offices from time to time, so that people likely to be interested may have a chance of previewing them. The first block has now started on its way and includes the following films:

Voice of Ulster, a general-interest film about northern Ireland, in two

reels.

Looking Through Glass, another tworeeler about making glass, by methods of both ancient craftsmanship and modern mass production.

Servant of the People, an account of the opening of the British Parliament and the functions of an M.P. (two reels).

Trained to Serve, a 17-minute film about the training of a new, non-Nazi police force in Occupied Germany (giving us incidentally some idea of the social problems to be dealt with).

Educationists might be interested in previewing all four of these films. The block has started in Vancouver, however, and will take over two months to work its way eastwards as far as St. John's.

In the past one of the difficulties about using British films has been the time involved in getting orders filled for prints and replacement footage. At the request of the National Film Board, however, the United Kingdom Information Office has made special arrangements with London for filling print orders promptly and fast, so that in future this difficulty should not arise.

Special Catalogue Supplement, Association Screen News

The Benograph Division of Associated Screen News has issued an important supplement to their regular catalogue of educational films and film strips, slides, etc., entitled "16MM Short Subjects". We suggest that interested readers write for their copies without delay.

The catalogue is divided into two sections. Section 1, "The Earth and Its People" Series contains sound films on countries, in every hemisphere from Canada to South America and from the British Isles to Oceania. These films should undoubtedly prove of very great value in social studies classes. The second section lists films of the March of Time Forum Films Series, thirty in all, specially suited for showings to adult study groups. They should be valuable additions to any school film library.

Copies may be obtained at any office of Associated Screen News or direct from the head office in Montreal.

Ages and Stages-Film Series on Child Development, N.F.B., Ottawa, Can.

He Acts His Age, number one in the "Ages and Stages" series on child development, is now ready for distribution. It studies the play of children from one to fifteen years old, shows the characteristics of each age group, and stresses the importance of parents' understanding these progressive stages. This film, which is in colour, was sponsored by the Department of National Health and Welfare. It is of particular interest to teachers as well as to parents.

Each N.F.B. regional office now has prints of two outstanding British films on child development also: Children Growing Up with Other People and Children Learning by Experience. Made primarily for teacher training, these films pose a number of important questions about the upbringing of children without attempting to give final answers; their purpose is to make us think and discuss. Nearly all the shooting was done without the children's being aware that the camera was there; their conduct is therefore delightfully natural.

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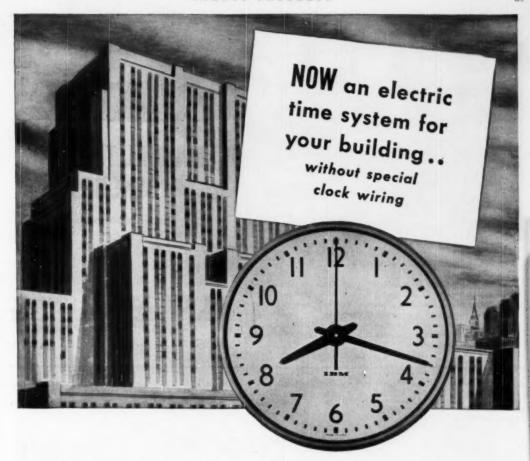
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Ants, English Children, The Zoo-16 mm. black and white, sound. E.B.F.

Three new educational motion pictures are being released by Encyclopaedia Britannica Films.

Ants and English Children are the titles of two black and white one-reel 16 mm. sound films. The third picture is a one-reel 16 mm. sound subject in full color, entitled The Zoo.

The Zoo, designed basically for primary grade studies, shows close-up studies of the many animals which live in the barless replicas of their native habitats at the Brookfield Zoo.

Ants. a film for the science and biology areas of the curriculum, shows by extreme close-up photography the varied activities of four types of ants—mound builders, black ants, household and carpenter ants, as well as the life cycle of the carpenter ant.

eycie of the carpenter ant.

English Children, newest of EBF's "Children of Many Lands" series, depicts the typical life of an English worker's family in the city of York, stressing daily activities of the children in a modern school, on the playground, at a cricket match, and at a grocery store.

The Film Monthly, Box 2608 G.P.O., Sydney, Australia. Overseas Subscription One Pound.

We have just received copies of a new film magazine inaugurated in Australia which we believe is of outstanding interest to Canadian educationists. The magazine deals with educational, religious and commercial subjects, lists film societies, reviews and discusses the mechanics of projection equipment. In the issues to hand are certain outstanding articles, one by A. L. Moore, consultant on visual aids of the Commonwealth Education office entitled, "How to Teach With Films". He makes the point that the film should be the servant rather than the master in the classroom, and describes an experiment in different methods of film teaching to support his contention that it pays to hold a discussion immediately after the showing, and also to give a second screening as well as preparing the class beforehand.

Another article discusses the production of a series of social studies films by the Australian National Film Board in co-operation with the Commonwealth Office of Education. The films are for juniors and include films on milk, bread, letters, the police, firemen, etc. Child actors will be used in the series.

Visual Education Centre, Victoria, Australia.

The Visual Education Centre of the State Department of Education of Victoria, Australia, directed by Mr. E. J. Perry is, according to all reports, very much a going concern. It uses mobile units to take films into classrooms in both city and country schools. Each projectionist visits sixteen schools a fortnight, spending one-half day in each and giving some 4,000 screenings each year. There are five

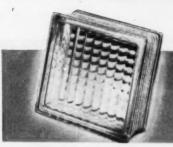
rural circuits giving shows to groups of the same grade collected from surrounding schools, by arrangement with the district inspector.

The centre has a library of over 1,000 films, which it also lends to teachers possessing the Department's certificate of competency in schools with their own projectors. Films may be booked up to 12 months in advance. Filmstrips, too, are lent to the 900 schools which have their own projectors. The centre gives courses in the techniques of teaching with films in the three state training colleges, provides lectures and screenings, and trains teachers in 16mm sound film projection. The Department's policy is to encourage the use of related sound films and filmstrips, in conjunction; the filmstrip, they say, to direct the pupil's attention to the subject, the sound film to do the follow-up work.

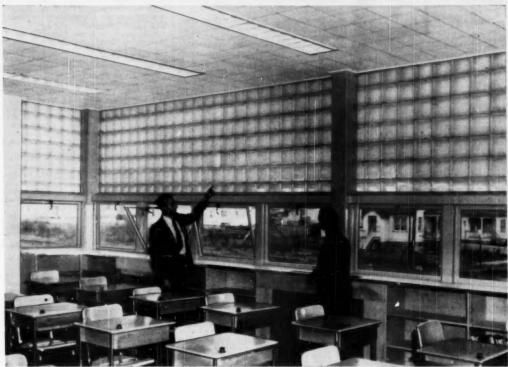
The centre also produces filmstrips, teaching films and wall-charts, and offers technical help in radio installations for schools as well as in all matters related to visual aids.

Regions of Canada — Geography Filmstrip, N.F.B., Ottawa, Can.

The Geographical Bureau is sponsoring a new filmstrip on the regions of Canada and it should easily be available before the end of this school year. Colour is used for the numerous maps and for the backgrounds of the captions (a different colour for each region), with attractive effect.



DAYLIGHTING



WITH INSULUX GLASS BLOCK

The primary reason for the use of Insulux Glass Block in class room fenestration is not alone more light, but better light. Just as a child seated at the far side of the average class room gets too little light, the child sitting next to the window often gets too much, because of glare.

Light carried into a room through Insulux Glass Block is different light because Insulux is prismatic in structure. Every child in the County High School at Val d'Or, Quebec, here illustrated enjoys almost equal light. As its name implies Insulux Glass Block also provides insulation permitting larger window areas without increased heating costs.

We will be glad to furnish you with full information on the use of Insulux Glass Block in new school construction or if you are modernizing, how Insulux can easily and helpfully fit into your plans. Write to Head Office, 165 Bloor Street East, Toronto.

Pilhington Glass LIMITED



HEAD OFFICE—165 BLOOR ST. E., TORONTO, ONTARIO • BRANCHES: SAINT JOHN, N.B.,
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EDMONTON, VANCOUVER • AGENTS: KITCHENER: TAIT GLASS CO. LTD. • VICTORIA: O'NEIL GLASS and PAINT, LIMITED



No matter what kind of floors your building employs, you can make them more attractive—longer lasting, by using the correct floor finishing, refinishing, cleaning and maintenance methods. This free book tells you the methods by which you can give more economical and efficient care to your particular types of floor, including:—

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Please send me a free copy of Floors without Flaws.
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MISCELLANEOUS ITEMS - NEW EQUIPMENT AND SUPPLIES

Free Trade in Educational and Scientific Equipment

By Peter Duberg, Unesco Features Staff Writer

A GREAT many countries continue to hurt themselves and their own people by tariffs and import bans on scientific, educational and cultural materials.

Countries with high death rates from tuberculosis impose tariffs on X-Ray machines—a prime weapon in the war against tuberculosis. Countries fighting illiteracy and trying to industrialize themselves have barriers against the books and teaching aids which would help their children to learn to read and their eager young people to gain industrial skills.

"Duties are prohibitive on every kind of scientific equipment, from test tubes and measuring spoons to cyclotrons," says an internationally-known biophysicist and cancer fighter. "I was pleasantly surprised to learn that radium itself is ordinarily free of duty—but there is a heavy duty imposed on the platinum containers in which it is carried.

"In one city—and there is no good reason to use names—I designed and built a radon plant for the extraction of radium to be used for the treatment of cancer. I was asked to return to my own country and to bring my radon

own country and to bring my radon plant to our only cancer hospital.

"At the port of entry, the customs men refused to consider the real nature and purpose of this equipment, but regarded it as just so many vacuum tubes, motors, pumps and lengths of tubing, and required me to pay about 20% of its value."

There was a happy outcome for the cancer sufferers of Dr. 7's country, for he paid the duty, amounting to some \$3,000, and brought in his equipment. There was even a happy outcome for the doctor, when his country's Health Minister interceded and obtained for him a refund of the amount he had paid.

There has not been so happy an outcome for the victims of cancer, paralysis, tuberculosis and other ailments, in many other countries.

Customs regulations often make it more difficult for people to get the things that make life worth living—music, books and pictures, for example. Moreover, if these achievements of one country's culture could move more freely to other countries, it would help people everywhere to understand each other better.

Ten years ago, one country-and it could be almost anyone's country-

gave money to one of its most gifted young men, to go abroad and study painting.

The young artist fully justified the faith of his sponsors at home. He became a success. His works were in demand, at good prices.

Last year, he came home to spend the rest of his life, painting and teaching, enriching the life of his country. He brought 100 of his paintings, some as gifts to museums and some to sell, for an artist must live.

The experience of the artist was like that of the doctor: he was forbidden to bring in his paintings, without paying a ruinous duty. Sale of the canvasses would "compete" with domestic production, which was almost non-existent—a production that could only be encouraged by the example and teaching of the returning painter.

In scores of countries it seems that customs regulations spell NO to the doctors, pharmacists, teachers, Health and Education Ministers, who reach out their arms for the things which are stopped by a forbidding palm at the gates of their countries.

Unesco has made several moves, intended to relieve the situation. It has asked a 34-nation international trade conference, now in progress in France, to reduce or completely eliminate duties on books, newspapers and periodicals, maps and charts, school furniture, teaching equipment, basics cholastic materials, educational recordings, musical scores, educational films, scientific instruments and original works of art.

Also, Unesco has drafted two international agreements to overcome this tariff obstacle. The first of these includes audio-visual materials, such as film strips, educational films, tape and disc recordings. This has already been circulated to member nations for signature. The second agreement will cover publications, including books, newspapers and periodicals.

The American economist, Henry George, once wrote, "A protective tariff is the means whereby we do to ourselves, in time of peace, what our enemies do to us in time of war. We blockade our own coasts, and keep out the things we want and need."

blockade our own coasts, and keep out the things we want and need."
Whatever may be argued about the general validity of George's opinion, there is no doubt of the great injury resulting from barriers against items of educational, scientific and cultural value, and of the benefits which will follow their reduction.

Ditto of Canada Expand Plant

Ditto of Canada Ltd. has announced plans to erect an addition to its manufacturing plant, Mendota Road, Etobicoke. This will triple the present floor space, thus providing for expansion of Ditto's duplicating machine and duplicating supply manufacturing operations.

The new addition will be a complete-

ly modern sprinklered two-storey cement block and brick building representing a total investment of approximately \$100,000.00. This additional unit represents a further step in Ditto's plans to provide complete manufacturing facilities in Canada for its line of gelatin and liquid duplicators, duplicating supplies and printed business forms.



Summer Time MEANS

Sanding Time

FOR BLACKBOARDS

Sterling No. 1000 Sander

FOR DESK TOPS

Porter-Cable No. A3 or BB-10 Portable Belt Sander

FOR THE FLOORS

Porter-Cable F89 Speedmatic Sander

The Supply House for the School Workshop.

games T. DONNOLLY Company

L I M I T E D 321 KING ST. W. - TORONTO 1, ONTARIO

Cellulose Sponges Now Made in Canada

Have Wide Variety of Cleaning Uses in Both Home and School

The production of cellulose sponges is heralded as another triumph of chemistry over nature. Such sponges, it is claimed, have all the advantages and few of the disadvantages of the natural marine variety. They are said to be longer lasting, grit free, soft and pliable when wet and able to be sterilized by boiling.

Establishment of a cellulose sponge industry in Canada by Canadian Industries Ltd. is due largely to an increasing demand in industrial, commercial and household fields which marine sponges could not satisfactorily meet. Because of varying conditions on the oceanic floor, supply and quality of the latter were often uncertain. When crops were plentiful prices were low. When they were poor, prices skyrocketed. No control was possible over sizes and shapes.

Subjected to strict and continuous quality control in the plant laboratory, cellulose sponges possess uniform chemical and physical properties and can be cut to any desired shape or size. There is little if any variance in prices and supply. Price to consumers will be much less than of those harvested from the sea.

Essential ingredients used in the manufacture of cellulose sponges are pure regenerated cellulose and a special reinforcing fibre. Wood pulp is treated with caustic soda, shredded, then combined with carbon bisulphide to form viscose. Other ingredients are added and the mass is then coagulated to form the regenerated cellulose. The finished product absorbs 20 times its weight in water and even when water-soaked, floats. By controlling all ingredients and manufacturing processes, texture and pore openings can be custom made to fit individual requirements.

The Shawinigan Falls plant is producing sponges suitable for a wide variety of uses in the household, garages, restaurants, meat packing plants, laboratories and hospitals. They are in constant demand by transportation companies and building maintenance people, and are even employed as blackboard crasers in schools.

Uses for the new cellulose sponges include:

- In the home—for washing floors, walls, windows, woodwork, dishes, upholstery, bathrooms; as bathing sponges; for dusting furniture; applying cosmetics.
- 2. In garages for washing cars, trucks and buses.
- In restaurants for washing counters, dishes, walls, floors, etc.

- 4. In the meat packing industry for washing carcasses.
- In hospitals for washing patients.
 kitchen utensils, bed frames, operating room equipment, bed pans, etc.
- In laboratories for cleaning apparatus and work tables.
- 7. By transportation companies for washing train and bus windows.
- 8. By building maintenance people for washing walls, floors, washrooms, windows, etc.

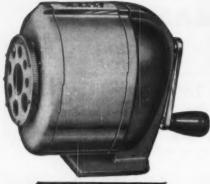
Cellulose sponges are being made in five different sizes at the Shawinigan Falls plant—in turtle-back and rectangular shapes.

Special sizes of cellulose blocks will be supplied to Canadian mop makers for manufacture into a variety of specialty cellulose sponge mops and cleaning equipment.

Appointed Director of Sales Co-ordination

Robert G. Fitzpatrick has recently been appointed Director of Sales Coordination for Underwood Limited, with headquarters in Toronto. Formerly active in Portable Merchandising, and latterly as Director of Public Relations, Mr. Fitzpatrick brings to his new post some years of experience in sales and personnel work, as well as in the promotional field.

Designed for Greater Economy —



BOSTON WELL KS

The BOSTON KS illustrated is equipped with dial selector which guides pencil to the BOSTON Speed Cutters. The machine, now Canadian Made, is finished in an attractive metallic silver grey shade. Write to-day for further information and illustrated folder.

BOSTON PENCIL SHARPENERS

Specify

BOSTON KS

FOR SCHOOL UTILITY

- 1. Dial selector for 8 size pencils.
 - 2. BOSTON twin milling 15 cutting edge cutters.
 - 3. All metal, nickel plated receptacles.
 - Streamlined heavier stand for greater classroom strength.

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THE LUCKETT LOOSE LEAF, LIMITED

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New Edition of Lathe Operator's Handbook

Publication of the new and revised edition 49 of the book "How To Run A Lathe" is announced by the South Bend Lathe Works. Containing 128 pages and more than 350 illustrations on the care and operation of metal-working lathes, this book may be used as a reference by experienced machinists or as a text for the apprentice or shop student.

Eleven chapters cover various types of work including the correct installation and leveling of the lathe, grinding cutter bits, turning, boring, thread cutting, taper turning, drilling, reaming, and tapping. Clearly written in nontechnical language the instruction material is easy for the beginner to understand.

The first edition of this book was copyrighted in 1914. Each succeeding edition has been revised and improved to include suggestions and ideas that have been submitted by hundreds of practical shop men. New material added in the latest edition includes machinability ratings and cutting speeds for various kinds of steels; standard tolerances for press fits, running fits, push fits, and sliding fits; allowances for finish turning, filing, polishing, grinding, reaming, lapping and honing; and tooling dimensions for South Bend Lathes.

Edition 49 "How To Run A Lathe",

is available in paper binding at 25c or inimitation leather fabrikoid binding at \$1.00 a copy postpaid. Sample copies will be sent free of charge to Vocational Directors and Instructors. For sample copy write to A. R. Williams Mechy. Co. Ltd., 62 Front St. W., Toronto.

G.E. Announces Fractional-HP Dynamometer Set for School and Industrial Use

A new fractional-horsepower dynamometer set for industrial and educational use, including college, university, and technical high school levels, has been announced by the Educational Section of Canadian General Electric's Apparatus Department.

Having general features comparable to those of larger dynamometers, the new low-priced unit provides an accurate means of determining speed-torque curves, fuel or energy consumption, efficiency curves, maximum running torque, etc. In the study of characteristics of both driven and driving machines, the FHP dynamometer set will be a valuable tool in industrial laboratories as well as in engineering and technical schools of both the college and high school levels.

The equipment has a continuous absorption or motoring rating of % hp. at 1725 rpm, and an intermitten absorption rating of 1½ hp. Maximum permissible safe speed is 4000 rpm, thus

permitting its use with 3600 rpm notors, and with internal combustion engines and other mechanical apparatus. Included in the set is a 9% inch Chatillon dynamometer scale graduated in pounds with 0.1 pound subdivisions. The scale is well damped for easy reading and accuracy.

ing and accuracy.

Longitudinal slots, parallel to the shaft of the motor, are located in the base of the equipment so that test motors, generators, or mechanical equipments can be mounted easily.

The dynamometer includes a selfcontained control panel with essential instruments, switches, a field rheostat, and screw-base resistance-type loads. Indicating tachometer equipment is an optional accessory.

New Floor Treatment Washes Out of Mops

Realizing that cleanliness and speed are the two big goals in a good dirt control program, Huntington Laboratories, have developed a new emulsified mop dressing — Huntolene Emulsified Floor Maintainer. The new product is suggested as a daily treatment for floors, walls, furniture, even blackboards. It cleans quickly and thoroughly because it gets all the dirt on contact, eliminating, it is claimed, need for rubbing, or retracing steps.

It is also claimed that once a surface has been Huntolene-cleaned every day, dust clings to it, can't get into the air

New Princess Elizabeth School, London, has TILE-TEX Flooring throughout –

installed over radiant heating."



The larger of these two photos shows a typical classroom and the smaller one a view of the modern Home Economics Department. The Architect for this beautiful public school in the progressive city of London, Ontario, is Robt. D. Schoales of London Board of Education. The flooring contractors are: Bernardo Marble Terraso, a Tile Co. Ltd., London, Ont.

BEAUTIFUL, QUIET, ECONOMICAL FLOORS

It's always a wise choice when Tile-Tex floors are installed, particularly in buildings employing radiant heating. Asphalt Tile is one of the few floor coverings that perform satisfactorily with this heating system—and Tile-Tex offers you these additional features! The range of colors and patterns is practically unlimited, and the colorful beauty at the tile next door to everlasting—because Tile-Tex colors are part and parcel of the texture, they can't fode. The smooth surface of Tile-Tex permanently resists stains and scars, and the whole floor is easy to keep spic and span. There's new quietness and comfort when you walk on Tile-Tex floors—the Asphalt Tile that is low in first cost, low in upkeep cost and permanently beautiful. Tile-Tex is the best flooring for the schools of today and tomorrow!





Tile-Tex flooring is one of many fine-quality products for Industrial, Commercial and Domestic applications made in Canada, by

The Flintkote Company of Canada Limited

30th Street, Long Branch, Toronto 14

Sales offices in: Vancouver, Edmonton, Calgary, Winnipeg, Toronto, Montreal, Sackville, H.B., Charlottetown, and St. John's, Hild.



again for further circulation. After several Huntolene applications, much air-borne dust is eliminated.

Because it emulsifies, or mixes with water, Huntolene breaks up into microscopic parts when a treated mop or cloth is washed. These particles are suspended in the water and float away, so that embedded dirt and grime wash out completely, leaving the mop clean and fluffy, sanitary and easy for the custodian to handle.

The new Huntington product leaves a fine film that helps to prolong the life of sealed, varnished, waxed or unfinished surfaces.

For a booklet giving full information about the Huntolene cleaning and sanitizing program, write to Huntington Laboratories, Ltd., 70 Duches Street, Toronto.



Honeywell Appoints New Vice-President

Appointment of W. H. Evans as vicepresident and director of Minneapolis-Honeywell Regulator Company Ltd., Leaside, Ontario, is announced by Harold W. Sweatt, president. Mr. Evans will continue in his position of general manager of the company.

He joined the company in 1931 as accountant and office manager. In 1938 he was appointed assistant general manager and he became general man-

ager three years later.

Born at Acton, Ontario, he attended elementary schools at Beaverton and Toronto and also the University of Toronto. He is a member of the Toronto Board of Trade, an executive of the Stoker Institute of Canada, an associate member of the American Society of Heating and Ventilating Engineers (Ontario Chapter), the National Warm Air Heating and Air Conditioning Association and the Toronto executive committee of the Canadian Manufacturers' Association.

With factory and head office at Leaside, Minneapolis-Honeywell has branch offices from Vancouver to Montreal. It is the world's largest manufacturer of automatic controls for heating, ventilating and air conditioning. The company also manufactures a wide range of power plant and process valves and the Brown line of industrial instruments.

Playground Equipment Demonstration Centre

Recreation directors, parks superintendents, school board officials, municipal purchasing agents and all Mayors, Reeves, Commissioners, members of Councils or related civic bodies are invited to the first complete outdoor display of Canadian playground equipment.

The Playground Equipment Demonstration Centre will exhibit a full range of items of leading Canadian playground equipment manufacturers from May 1st to August 31st.

Authorized civic or industrial representatives and members of the Press will be welcome to inspect the exhibits daily except Sundays.

Location is 3701 Bloor Street West, Toronto, Ontario, corner of Brentwood Road South and Bloor Street. Further information may be obtained by writing Playground Equipment Demonstration Centre, 3701 Bloor Street West, Toronto 18.

Who says: "you can't please everyone?"



"Saves me valuable time," says the PRINCIPAL...

The day is gone when a principal has to "live by the clock"... waste valuable time ringing bells. No matter how varied the daily program, an Edwards Clock and Program System can take over with no trouble. Signals can be operated at *one* minute intervals, 24 hours a day, 7 days a week!

"Saves me needless servicing," says the MAINTENANCE MAN...



It's the maintenance staff's dream...a clock and program system operating without need of a master clock that has to be regulated and adjusted! No wonder schools report up to 18 years of trouble-free service from Edwards Telechron-motored clock systems!



"Saves us responsibility," says the SCHOOL BOARD...

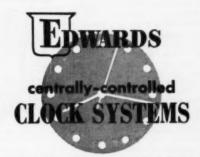
By installing Edwards signaling, communication and protection systems school boards can centralize responsibility—assuring complete, integrated service at all times.

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"Saves me nerve-racking worry," says the PARENT...

Most important is the parents' sure knowledge that their children are attending a school dependably safeguarded by Edwards... the finest protection equipment man can design and money can buy! For full details on Edwards clock, fire alarm and telephone equipment, send for our illustrated bulletins.



77 years' experience in electrical signaling Clock & Program...Telephone...Fire Alarm Systems

Will he learn thoughtful example about towels by thoughtful example or bitter experience? Tiny minds have a lot to learn. It's important to their health that they learn about sometic by thoughtful example.

Tiny minds have a lot to learn. It's important to their health that they learn about towels by thoughtful example . . not bitter experience. Set the example for your school today by using Interlake Paper Towels. Interlake Paper Towels in your school washroom will give protection against hand-borne diseases at no extra cost. Ask our nearest office to demonstrate the high absorbency and extra strength of Interlake Paper Towels and to show you the Interlake vertical dispenser which releases one towel at a time.

Interlake Paper Towels, both Interfolded and Continuous Roll, are available. Order them by name— Interfolded Towels—Atlas & Simcoe Roll Towels—Peerless

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Three Rivers Installs Traffic Signal to Protect School Children

Believed to be the first installation of its kind in the Province of Quebee, a traffic signal system designed specifically to protect school children in the vicinity of the school was recently put into operation at Three Rivers by civic officials.

The new traffic signal is not at an intersection, but in front of the High School on St. Maurice Street. The system is designed to include the normal sequence of red, yellow and green lights, but when traffic has the right of way and no pedestrians wish to cross the street, the green light flashes urging motorists to slow down without making a complete stop.

When a pedestrian wishes to cross the street, he presses a button underneath the signal lights which puts the normal sequence of green-yellow-red lights into operation. Designed to protect students as they leave or arrive at the school, this hand operated mechanism turns the lights facing the traffic to yellow and then red forcing cars to make a complete stop, while a green light indicates to the pedestrians that they have the right of way.

Full details of this interesting safety installation may be obtained by writing the nearest office of Northern Electric Company Limited or head office, Montreal.

Boston Sharpeners Are Now Canadian Made

29-47

The Luckett Loose Leaf, Limited, Toronto, announce that the Boston line of Pencil Sharpeners is now "Made in Canada" under their direct supervision. Mechanically, Boston is the same machine although its appearance has changed. Bostons are now distinguished by a nickel plated streamlined receptacle and a blending hammer-tex finished stand in a beautiful two-tone

faster pointing and longer life, are put through several rigid tests with scientifically accurate instruments. As a final inspection check, pencils are actually sharpened in each machine before it is shipped. Boston combines sharpening perfection with modern styling to present what the makers aptly name the "Sharpest" pencil sharpener on the market.



silver grey. The cutters, the very heart of any pencil sharpener, are for the first time produced in Canada. The 15 blade speed cutters which ensure

A New Style Teacher's Desk

On display at the recent school conventions in Chicago and Atlantic City was a new teacher's desk featuring a satin chrome finish. Manufactured by Royal Metal Manufacturing Company, Chicago, Ill, and Preston, Ontario, this and other equipment of radical new design was exhibited with the purpose of eliciting comment from school supply buyers and manufacturers. In addition to the free moving, spacious drawers, the desk features a handy shelf for storage of often-used items. Royal Metal's extensive use of satin chrome tubing in both square and round design earned for their products the title of "the most expensive school equipment made." Free use of plywood in combination with satin chrome also evoked notice of the trend to flexible, mobile chairs, desks and tables for schools of all levels.

MORE AND MORE **SCHOOLS USE**

C-I-L Colour Conditioning

C-I-L Colour Conditioning Service makes possible the scientific selection of colours which reflect and diffuse light, and protect pupils and teachers against eyestrain. Following is a partial list of schools in which C-I-L Colour Conditioning principles are applied.



Sydenham High School, Sydenham, Ont.



Prince of Wales School, Hamilton, Ont.





Senior Public School, Weston, Ont.



Riverdale Collegiate Auditorium, Toronto, Ont.

Other Ontario Schools in which C-1-L Colour Conditioning Conserves Light and Eliminates Glare

Toronto Public Schools and High Schools Belleville Public Schools and High Schools Meaford Public School Merritton Public Schools Port Hope High School Allenford Public School **Toronto Central Technical School** Chatham Vocational School Fonthill Public School **Guelph Collegiate Institute** Lakeview Beach School Suburban Cornwall High School Madoc High School Prince Charles Public School, Napanee Catherine St. School, Smith Falls Sharbot Lake Schools Mountain Grove Public School **Bedford Public School** Kalandar Public School Northbrook Public School Bessborough Public School, Leaside Royal Military College, Kingston Listowel Public School

C-I-L ADVISORY SERVICE

Your nearest C-I-L District Office will be glad to assist you in planning suitable colour schemes to make the most effective use of light in school class-rooms. PAINT AND VARNISH DIVISION—Hali-fax, Montreal, Toronto, Winnipeg, Regina, Calgary, Edmonton, Vancouver.

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Lewiscraft WHERE craft experience has taught better solutions to your problems. They are one reliable source for all craft aids. A convenience that saves you time and money.

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> A Lewiscraft catalogue will make your ordering easier. The help it will give you is vast.

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8 BATHURST STREET, TORONTO



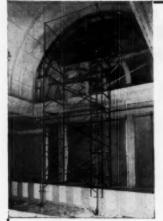
Magictape Recorders

Utah Electronics (Canada) Limited, has opened a Toronto sales office with factory trained service personnel, and has appointed Vanco Cine Equipment, Limited, as distributors for Western Ontario, for their products Magictape recorders and Radio tape recorders. Vanco Cine offices will be used as the Toronto sales office for Utah Electronics Toronto Branch.

Magictape recorders will be promoted for the use of executives, radio stations, voice training (public speaking), sales training, dictation and other uses

Edwards Introduces New Signal Bell

What is claimed to be the loudest signal bell ever made for factories, offices and schools, is the new Adaptabel, recently introduced and now being manufactured in Canada by Edwards of Canada Limited, Montreal. Independent laboratory tests prove the Adaptabel to be up to 420% louder than other bells. Loudness factor ratings were taken at 10 feet, instead of at source, which would be of no practical value. Edwards developed and supplied most of the alarm signals used by the U.S. in World War II and



SAFWAY SCAFFOLD

for Painting Decorating and Maintenance Work

You can solve the most difficult maintenance jobs speed up painting and decorating with SAFWAY rolling towers. Constructed

of tubular steel, SAFWAY rolling towers are easily and quickly erected to any desired level . . . span desks and other floor obstructions . . . are completely mobile. Why not try SAFWAY on your next job. The resultant saving in time and money is truly amazing.

Write for Information

SARNIA BRIDGE



King St. W., Toronto.

Built exactly to the scale of one inch to one foot, the "Applianset" with its adjustable walls, doors and windows, provides a highly realistic facsimile of any kitchen.

Easily and accurately assembled, the kit is proving of great value to retailers, utilities, architects, builders and schools, for window displays, and demonstration and teaching aids.

The Applianset consists of 77 appliances, cabinets and kitchen units made of light, durable and attractive plastic; four metal walls, measured off to scale; four windows; two doors; a 16-page the Adaptabel is the culmination of many years' experience making bells that could be heard loud, clear and penetrating above the din of battle-wagons in action. The new Adaptabel comes in three sizes: the 4" size for



offices and stock rooms; the 6" size for factory assembly departments and light machine shops, and the 10" size for heavy press rooms and boiler rooms. Economy of operation can be judged from the fact that the 4" Adaptabel is actually louder than other 10" bells. Installation is easy, because Adaptabels will fit all mountings with no contacts or springs to adjust. Completely weatherproof, the Adaptabel is also available in all 3 sizes for outdoor use. A bulletin, giving loudness factors, voltages and specification details of the new No. 340 Adaptabel can be obtained by writing Edwards of Canada Limited, 675 Butler Street, Montreal, Quebec.



OR YOUNGE

Here is the outcome of a decision made at Forest Hill School, Toronto, to prepare a special classroom for younger children. A flick of a switch and this kindergarten is bathed in floods of soft, sunny light Six, 207 Silvray Luminaires, 300-500 watt, give excellent illumin-. . from six Silvray Luminaires. This ation as well as a modern touch to this special classroom at Forest Hill School, Toronto.

illumination plus light green walls, darker green dado and white ceiling create a pleasant, inviting atmosphere.

Silvrays were chosen because the light they give is easy on the eyes. Besides,

Silvrays give 10% to 30% more light Silvrays give 10% to 30% more light than ordinary indirect fixtures which usually means fewer units to buy. The Silvered Bowl Mazda Lamp acting as a dust-proof, hermetically sealed reflector lessens the need for frequent cleaning.

Silvray Luminaires add a modern touch to any interior and are recommended for offices, hotels, stores, schools and other institutions. Ask your electrical whole-saler to show you ALL the advantages of Silvray Luminaires.

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OUR 55TH YEAR-

SPENCER MOULTON SPORTS BALLS

REASONABLY PRICED



FOR YOUR BUDGET

AT LAST!—The ideal inflated India Rubber Ball—for all ages—for Sports, Games, Pastimes, Physical Training, Gymnastic and Rhythmic Exercises. Trains young hands in the proper grasping and handling of the ball.

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- Samples or Complete Free Information Sent on Request

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New Low Floor Machine

Huntington Laboratories announce a new floor machine, "that's low enough to scrub and polish under hard-to-move furniture and heavy enough to do quality work."

The Low-Hite Machine measures 11 inches from the floor to the top of the motor housing. It polishes and scrubs, buffs waxes, steel wools floors, and shampoos rugs. Noiseless and efficient, the Low-Hite is equipped with the safety grip switch which is an original Huntington development. It is available in 12 or 16-inch sizes with a quiet planetary gear drive or for hospital use with the famous Silent Huntington Belt Drive.

This newest addition to the Huntington line has plenty of power for extra heavy chores. All its weight is concentrated where it is needed most . . . on the brush. Retractable wheels, which are up out of the way when the machine is in operation, are another Low-Hite feature. For complete details and a descriptive folder, write Huntington Laboratories of Canada Ltd., 70 Duchess St., Toronto, Ont.

New Fibre Floor Mat

A floor matting which it is claimed outwears coconut matting, twenty to one, is being introduced for the first time to Canadian users by Gordon A. MacEachern, Floor Finishing Specialists. Known as "Tintawn", the material used is sisal, a 100% pure vegetable fibre which had been developed

originally for the manufacture of ships hawsers.

Physical characteristics of this new material are long fibres, seven feet instead of six or seven inches; thinner strands with more tensile strength—allowing for a finer, tighter weave. The longer, stronger fibres allow less chance of unravelling and eliminate the annoying loose bits of fluff normally found in coconut matting.

As "Tintawn" matting, it comes in 50 yard rolls and widths of 36 or 54 inches. It is available in a variety of fast colours, which are yarn dyed before weaving, making for permanency, unlike other fibre matting which fade easily because they are dyed in the bulk or left natural. The fine weave makes for many attractive colourful combination designs, or in solid colours if preferred. "Tintawn" sisal matting is ideal for hallways, verandahs, stairways, cocktail bars, summer hotels, or any public place where there is heavy traffic.

Distributors—Gordon A. MacEachern, Floor Finishing Specialist, 15 Elm Street, Toronto, Ont, or branches in Belleville, Port Arthur and Hamilton.

Special Motor Coaches for Schools

The Welles Corporation Limited, of Windsor, announced that it has acquired the Canadian manufacturing, sales and service rights for the Marmon-Herrington line of motor coaches, formerly built by the Ford Motor Company. The line consists of two models, the 27-29, and the 31-35 passenger coaches, depending upon seating arrangements. These are powered by a heavy duty six cylinder economy engine, especially designed for this type of service. These new coaches, to be known in Canada as the "W-M-H" Welles-Marmon-Herrington, are the outgrowth of a predecessor Ford powered line, of which many thousands are operating in Canada and the United States.

Production plans are now in progress, and it is expected that deliveries will start in September.

As part of its overall policy, Welles Corporation will institute a vigorous program to ensure proper servicing of these coaches in the field, and wishes to assure all owners and operators of earlier model Ford coaches that adequate facilities for the maintenance and servicing of this equipment are available.

H. V. Welles, president of Welles Corporation Limited, states that plans for enlargement of the plant at Windsor to accommodate this added activity are now under way.

are now under way.

Sales of the new "W-M-H" Coaches
will be handled through the various
Welles sales branches and representatives located in Toronto, Calgary, Vancouver and Montreal.



Films and Filmstrips on Britain

The United Kingdom Information Office, Ottawa, has a large selection of educational films of high quality on the United Kingdom available for rent or purchase. They cover a wide range of subjects and are of value in the teaching of social studies, geography, science, history and the arts. Filmstrips of the same type and covering a similar variety of subjects are available for purchase of \$1.00 per reel. For catalogues giving details of the films and filmstrips available please write to the address below.

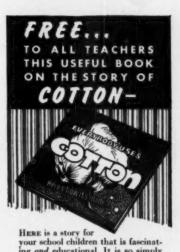
A limited number of pamphlets on various subjects suitable for educational purposes can also be supplied free of charge. When applying please state the subjects in which you are interested.

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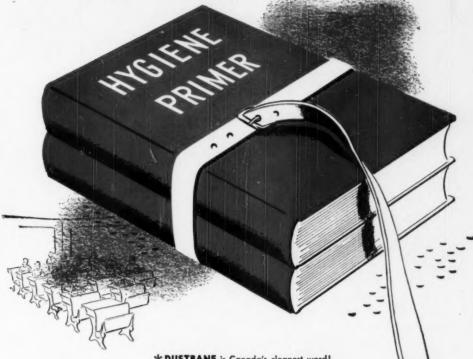
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